

METROPOLITAN TRANSPORTATION COMMISSION

# **Transit Sustainability Project**

## **Draft Paratransit Final Report**

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San Francisco, California

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## **Executive Summary**

The Metropolitan Transportation Commission (MTC) is conducting the Transit Sustainability Project (TSP) to establish a framework and implementation plan for a more robust, financially viable transit system that is both cost-effective and customer-focused. This is the ADA paratransit element for that project.

According to the most recent statistics compiled by MTC, paratransit accounted for only 5.4% of the total operating cost of public transit in 2009-10. However, there is widespread concern that the cost of paratransit services, especially mandated ADA paratransit services, could skyrocket in coming years because of the expected aging of the population.

## **ADA Paratransit Requirements**

The Americans with Disabilities Act (ADA) of 1990 and its implementing regulations require that every public entity operating a fixed-route transit system shall provide “complementary paratransit” to individuals with disabilities that is comparable to the level of service provided to individuals without disabilities who use the fixed-route system. The required service must be provided to “ADA paratransit eligible individuals,” which means people who are unable, due to a disability, to use the fixed-route service independently as determined by a process that each transit operator must establish. The service is called “complementary” paratransit because it is intended to “complete” transit service by making it usable by people who cannot use the fixed-route service.

The ADA regulations set strict criteria for complementary paratransit which result in the possibility that demand could rise continuously. In particular there can be no “capacity constraints.” This means trip requests by eligible riders cannot be denied as long as they are made within the specified reservations hours for a trip within the service area and service hours. The only exceptions are rare, isolated incidents, and those that occur for reasons beyond the control of the operator such as a natural disaster. It also means that service must maintain high standards of on-time performance, trip length (time on board), and telephone availability. It is illegal to establish any priorities based on trip purpose. The fare for a paratransit trip must not be higher than twice the adult single-ride fare for a similar fixed-route trip. Reservations for paratransit trips must be able to be scheduled for the next day up to the close of business of the prior day.

In ADA paratransit, unlike on fixed-route transit, rising demand almost always requires additional resources. On fixed-route transit, it is possible to attract more riders to use existing services, but on paratransit more riders almost always require adding service.

## **ADA Paratransit in the Bay Area**

There are currently 19 ADA paratransit programs in the Bay Area. With a few exceptions, each fixed-route transit system operates its own separate ADA paratransit service. BART and AC Transit jointly provide ADA paratransit in the East Bay as the East Bay Paratransit Consortium. BART also has agreements with several local transit systems, including San Francisco MTA and the Central Contra Costa Transit Authority (CCCTA) to provide service corresponding to BART service in their areas. The Marin County Transit District and Golden Gate Transit jointly provide Whistlestop Wheels, with responsibility for Marin local and inter-county trips respectively. SamTrans has two paratransit services: Redi-Wheels for the urban areas along San Francisco Bay and RediCoast for the rural Coastside.

In addition to ADA paratransit service, many areas have other paratransit services, sometimes provided by transit agencies but often provided by cities or other agencies. There are at least 32

non-ADA paratransit services operated by public agencies in the Bay Area. These services do things that ADA paratransit does not; for example they may serve areas where there is no fixed-route transit, they may provide trips based on same-day requests, they may serve people who are not eligible for ADA paratransit, or they may provide a level of assistance that ADA paratransit does not. These non-ADA paratransit services help meet the demand for specialized transportation in the Bay Area, serving trips for many riders who are eligible or likely eligible for ADA paratransit and who would otherwise increase the demand for ADA paratransit.

Transit operators in the Bay Area provide ADA paratransit through contractors. The only exceptions to this are that many smaller transit agencies conduct eligibility assessments themselves. Most contract providers are for-profit companies, but Sonoma County, Marin County/Golden Gate Transit, and the Santa Clara Valley Transportation Authority (VTA) all contract with local non-profit organizations. Contractors take trip reservations, schedule trips onto vehicles, operate the vehicles, and monitor service each day, communicating with drivers and passengers to make adjustments as needed. In most cases contractors also maintain vehicles and assess whether people who apply for service are eligible under the ADA rules.

## **Trends in ADA Paratransit**

The ADA is not a Federal program. Rather, it is civil rights legislation that mandates the provision of accessible transit service by public transit operators, including the provision of paratransit for persons who are unable to use fixed-route service because of their disabilities. Each operator must find funds to operate these services from funding sources they have available. For the most part, these are funds that can also be used for fixed-route operations or capital needs. For operations, these funds include California Transportation Development Act (Articles 4 or 8), State Transit Assistance (STA) funds, and local sales tax funds. Transit operators that receive Federal Transit Act Section 5307 (Urbanized Area Formula Program) capital grant funds can use a portion of these funds for ADA paratransit operations.

The cost of ADA paratransit for Bay Area transit operators grew rapidly in the early 2000s, but has moderated in recent years. For the four largest operators in the region (San Francisco MTA, East Bay Paratransit, VTA, and SamTrans), the operating cost of ADA paratransit grew by 65% between Fiscal Year 2000 and Fiscal Year 2010, but by only 10% between Fiscal Year 2005 and Fiscal Year 2010. Ridership for these four operators grew by just 4% between Fiscal Year 2000 and Fiscal Year 2010 and fell by 7% between Fiscal Year 2005 and Fiscal Year 2010.

For five smaller operators that participated in the Technical Advisory Committee for this project (Golden Gate Transit, Marin Transit, Central Contra Costa Transit Authority, Eastern Contra Costa Transit Authority, and Sonoma County Transit), operating costs grew by 136% between Fiscal Year 2000 and Fiscal Year 2010, but by only 27% between Fiscal Year 2005 and Fiscal Year 2010. Ridership for these operators grew by 32% between Fiscal Year 2000 and Fiscal Year 2010 and by 15% between Fiscal Year 2005 and Fiscal Year 2010.

Compared to national statistics, Bay Area operators have been very successful at managing the cost of ADA paratransit. From 2000 to 2009, for all transit operators reporting to the National Transit Database, the cost per trip for demand response/ADA paratransit increased by 82% from \$16.74 to \$30.47. This is a significantly greater increase than experienced for fixed-route bus service, which saw a 56% increase over the same time period. In the Bay Area in the same period, cost per demand response passenger increased by just 31% according to regional statistics reported by MTC.<sup>1</sup>

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<sup>1</sup> Statistical Summary of Bay Area Transit Operators Fiscal Years 2004-05 through May 2008-09, Metropolitan Transportation Commission, May 2010.

Broadly speaking, rising costs can stem from three types of factors: rising demand, rising costs for operating vehicles (e.g. cost per vehicle hour), and falling productivity, meaning it takes more vehicle time to provide the same number of rides. In the Bay Area:

- Demand for ADA paratransit has been increasing for the smaller operators but not for most larger ones;
- Most operators have been able to control increases in the cost of a vehicle-hour of service to about the level of inflation, and a few have been able to reduce the inflation-adjusted cost per revenue vehicle hour; and
- After some fluctuation in the early 2000s, most operators have been able to maintain or increase productivity, measured as passengers per revenue vehicle hour.

The causes of increasing demand may include: growing numbers of older adults, especially older adults with disabilities living in community settings rather than long term residential care facilities; the increasing ability of people with disabilities to live, work and engage in social, civic and spiritual activities within their own communities; shifting of trips that were once performed by human service agencies for own clients but are increasingly performed by ADA paratransit; and growing demand for transportation to and from kidney dialysis. In the early 2000s demand increases were triggered by improvements to service quality required to meet the federal ADA requirements. In more recent years, this has not been a significant issue in the Bay Area. In rural and low-density suburban areas, demand growth is probably fueled by continued population growth combined with limited public transportation.

The impact of growing numbers of older people on ADA paratransit ridership is not fully understood. There is no doubt that growing numbers of older adults will increase the number of people with disabilities in the Bay Area. However, older people generally travel less than younger people, and this is true for paratransit riders just as it is for other people. Also, older people who have been accustomed to driving in the past may prefer other options such as getting rides from family members or friends.

Looking at the cost of operating a vehicle-hour of service, as in the case of fixed-route transit, driver wages and benefits account for most of the cost of ADA paratransit. However, because these costs are included within payments made to contractors, exact figures are not available. Rising health care costs undoubtedly put pressure on the cost of service. Whether wages have been rising is unknown. Pension costs are probably not a significant factor in ADA paratransit because private operators do not offer retirement benefits comparable to those provided to public employee drivers.

Productivity (measured as passengers per revenue vehicle hour) has not been generally falling, but there are nevertheless pressures which make it difficult to maintain productivity levels and which could put pressure on productivity in the future. These include growing numbers of riders using various mobility aids that are not designed to be secured within a vehicle and take additional time to secure safely; longer trips; and slower operating speeds due to traffic congestion.

## **Strategies for Sustainability**

Twenty-nine strategies were evaluated for this project that fall generally under the heading of demand management, productivity improvement, cost containment, restructuring service, and alternatives to ADA paratransit. These measures have the potential to manage the cost of ADA paratransit service while maintaining mobility for riders. Many operators have implemented at least some of these strategies, but there is still room for many operators to implement many of the strategies.



## Priority Strategies

A detailed analysis of the twenty-nine strategies has identified six as regional priorities based on their potential to manage costs, impacts on riders' mobility, the number of operators that could apply them, and ease of implementation. Some of the strategies listed above have been merged because they are closely related. The full analysis is shown in the following table. The six priority strategies are:

**Travel Training and Promotion to Seniors:** Expanding travel training would increase mobility and help reduce growth of ADA paratransit demand, especially working with the schools and Regional Centers. Ideally, training and outreach can be conducted before individuals apply for paratransit, for example with school children and seniors who may need to curtail driving in the near future.

**Enhanced ADA Paratransit Certification Process:** Depending on the transit agency, available cost savings range from none to substantial. One centralized regional process is not needed, but many transit agencies can enhance their processes. Some smaller agencies could combine this function for efficiency and to support staff with specialized skills.

**Implementing Conditional Eligibility:** Opportunities exist at several transit operators in combination with an enhanced eligibility process. Some operators already have an eligibility process that can support enforcement of conditional eligibility. One operator is already conducting a type of conditional eligibility enforcement.

**Premium Charges for Service Beyond ADA Requirements:** The main opportunity is establishing fares for special service to human service agencies that exceeds ADA requirements.

**Human Service Transportation Coordination and Vehicle Sharing:** A cooperative effort, based on mutual mandates applying to human service agencies and transportation agencies could achieve cost savings for all parties. A regional effort to change state policy would be needed. In the short run, local agencies can make arrangements to share vehicle capacity, but this has only been demonstrated with a non-profit operator or broker.

**Walkable Communities, Complete Streets, and Land Use Planning:** The ultimate impact is very large, even though this is a long-term strategy in which transit agencies will only play a supportive role. It requires an active role from cities and counties. MTC and ABAG fund relevant programs.

The full analysis and rankings are shown in the following tables. The evaluation factors and the symbols used to represent them are:

**Financial Impact:**

★ ★ ★	High: potential for several percent reduction in operating cost
★ ★	Medium: potential for one or two percent reduction in operating cost
★	Low: potential for less than one percent reduction in operating cost

These assessments take into account the cost of implementation.

**Impact on Riders**

+	Positive: potential to improve the mobility of people with disabilities
=	Neutral: no significant impact on the mobility of people with disabilities, or a mixed impact
—	Negative: potential to reduce the mobility of people with disabilities.

**Geographic Area**

Degree of applicability to a range of operators throughout the Bay Area:

- Everywhere
- Widespread
- Limited

**Years Needed for Implementation**

One of three time frames:

- 1 – 2 years
- 2 – 5 years
- 5 – 10 years

**Ease of Implementation**

★ ★ ★	No significant barriers to implementation
★ ★	Barriers exist that can be overcome with some effort
★	High barriers exist that could prove insurmountable

**Regional Priority Strategies – Priority 1**

Strategy	Comments	Financial Impact	Impact on Riders	Geographic Area	Years Needed to Implement	Ease of Implementation
Travel Training and Promotion to Seniors	Expanding travel training would increase mobility and help reduce growth of ADA paratransit demand, especially working with the schools and Regional Centers.	★ ★ ★	+	Everywhere	2-5	★ ★ ★
Enhanced ADA Paratransit Certification Process	Depending on the transit agency, available cost savings range from none to substantial. One centralized regional process is not needed.	★ ★ ★	=	Widespread	2-5	★ ★
Implementing Conditional Eligibility	Opportunities exist at several transit operators in combination with an enhanced eligibility process. Some operators already have an eligibility process that can support enforcement of conditional eligibility. One operator is already conducting a type of conditional eligibility enforcement.	★ ★ ★	=	Everywhere	2-5	★ ★
Premium Charges for Service Beyond ADA Requirements	The main opportunity is establishing higher fares for special service to human service agencies that exceeds ADA requirements.	★ ★ ★	—	Everywhere	2-5	★
Human Service Transportation Coordination and Vehicle Sharing	Local agencies can share vehicle capacity now. Greater benefits may be available, but need a regional effort to change state policy.	★ ★ ★	+	Everywhere	5-10	★
Walkable Communities, Complete Streets, and Land Use Planning	Makes transit and walking more viable alternatives to paratransit. Requires an active role from cities and counties. MTC and ABAG fund relevant programs. Benefits more than paratransit.	★ ★ ★	+	Everywhere	5-10	★

## Medium-Priority Strategies – Priority 2

These strategies all have potential to manage costs and/or enhance mobility, but are ranked lower because of limited geographic application, difficulty of implementation, or the uncertain or long-term nature of benefits.

Strategy	Comments	Financial Impact	Impact on Riders	Geographic Area	Years Needed to Implement	Ease of Implementation
Enhance fixed-route service	Reduced need for paratransit. Supports travel training and implementing conditional eligibility.	★ ★	+	Everywhere	2-5	★
Partner with Community Agencies to Supplement ADA Service	Partnerships with human service agencies are promising for some transit agencies. Depends on identifying willing programs. Part of a strategy to preserve and expand human service transportation.	★ ★	+	Everywhere	2-5	★ ★
Vehicle Sharing	An effective strategy when pursued by a non-profit agency.	★ ★	+	Marin/ Sonoma	2-5	★ ★
Consolidated Administration or Operations	Possible opportunities in a few areas; principal benefit would be through enabling a separate control center, staffing for conditional eligibility.	★ ★	+	East Bay Northern Counties South Bay	2-5	★
Separating a Control Center from Vehicle Operations	Except for one operator, requires consolidating operations first. Then productivity and cost savings should be possible.	★ ★	+	East Bay Marin/ Sonoma Marin Solano	2-5	★
Targeted Transit Promotion to Seniors	Should be encouraged to the extent that funding allows. Payoff will be long-term. (Merged with Travel Training.)	★	+	Everywhere	1-2	★ ★
Shuttles and Community Buses	Shuttles may be cost effective in some situations but benefits for ADA paratransit depend on details of design and policies.	★	+	Everywhere	2-5	★ ★

Strategy	Comments	Financial Impact	Impact on Riders	Geographic Area	Years Needed to Implement	Ease of Implementation
Align Service to ADA Requirements	Stricter application of policies requiring attendants for some riders may be beneficial. Local operators should make decisions about fares and service area.	★	=	Attendant policies: everywhere	1-2	★★
Volunteer Driver Programs (non-ADA, supplementary)	Dependence on ADA paratransit may be reduced by supporting volunteer driver programs run by non-profit community organizations if funding is available.	★	+	Everywhere except SF	2-5	★
Targeted Transit Promotion to Seniors	Should be encouraged to the extent that funding allows. Payoff will be long-term.	★	+	Everywhere	1-2	★★
Shuttles and Community Buses	Shuttles may be cost effective in some situations but benefits for ADA paratransit depend on details of design and policies.	★	+	Everywhere	2-5	★★
Manage Supply of Revenue Hours to Match Demand	Depends on restructuring service delivery method to establish separate control centers.	★★	=	East Bay North Bay	2-5	★
Mobility Management	A community-based strategy for coordination that connects individuals with a range of services. Deserves support and further assessment of benefits.	★	+	Marin/ Sonoma East Bay SF	2-5	★
Paratransit Feeder to Fixed-Route Service	Could be implemented at most Bay Area transit systems as part of a program of implementing conditional eligibility screening.	★★	—	Everywhere except Solano	2-5	★

Strategy	Comments	Financial Impact	Impact on Riders	Geographic Area	Years Needed to Implement	Ease of Implementation
Consolidated Transportation Service Agencies	Establishes potential priority for some funding. One strategy for mobility management. Benefits of non-profit operators depend on relationships with transit operators.	★	+	To be determined	2-5	To be determined
Paratransit Technology	Operators should continue with plans for implementing IVR and to make full use of AVL/MDTs.	★	+	North Bay East Bay SF	2-5	★
Alternative and Hybrid Services	May be appropriate to replace under-performing routes on the fringes of a service area or in place of new fixed-route service on the fringes of a service area.	★	+	Marin/ Sonoma Solano East Bay Inland	2-5	★★
Internal Cost Cutting	Operators need to determine opportunities based on local circumstances.	★	?	Unknown	1-2	★
Taxi Trip Subsidies	Taxi subsidies by transit agencies or cities are useful where conditions allow and if funding is available.	Uncertain	++	South Bay Marin East Bay Inland	2-5	★

### Low Priority Strategies

These strategies are all useful in principle, but, depending on the operator, they have either been implemented, are already a routine part of operations, or are not applicable because of local operating methods and conditions.

Strategy	Comments	Financial Impact	Impact on Riders	Geographic Area	Years Needed to Implement	Ease of Implementation
Capitalizing Facilities and Vehicles	Depends on MTC exploring possibilities for expanded application of capital funds for ADA paratransit balanced with fixed-route transit needs.	★	=	SF	2-5	★

Strategy	Comments	Financial Impact	Impact on Riders	Geographic Area	Years Needed to Implement	Ease of Implementation
Controlling No-Shows and Late Cancellations	Maintain and enhance programs to control no-shows and late cancellations as needed based on local circumstances.	Uncertain	=	Nowhere	not applicable	Not applicable
Changes to Operating Policies	Operators should make changes as appropriate based on local circumstances.	★	—	Most operators	1-2	★
Effective Use of Taxis and Other Non-Dedicated Vehicles	There are few opportunities without changes to taxicab ordinances and other steps to enhance taxi service, including more widespread adoption of accessible vehicles.	Uncertain	=	Nowhere	5-10	★
Vehicle Mix	All operators experiment with their vehicle mix and see few opportunities for improvement.	★	=	Uncertain	2-5	★
Use of Volunteer Drivers (in ADA paratransit)	No further applications in the Bay Area for volunteer drivers on ADA paratransit vehicles.	None	=	Nowhere	Not applicable	Not applicable
Fare Incentives to Use Fixed-route Service	Most large Bay Area transit agencies already offer free or very inexpensive fixed-route service for ADA-eligible passengers.	Uncertain	+	Except South Bay	1-2	★★★





# Chapter 1. Introduction

This is the draft final report for the ADA paratransit element of MTC's Transit Sustainability Project (TSP). The TSP responds to analysis for the Bay Area's long-range transportation plan, *Transportation 2035*, that suggests that the region's transit system is not sustainable based on current projections of transit costs and reasonably anticipated revenues. The long-term viability of the system is at risk, as is the ability of the region to provide levels of service that match the region's objectives. Coupled with the current impacts of the economy and State budget on transit service levels, the magnitude of anticipated operating and capital shortfalls is a cause for regional concern and action.

The TSP is being conducted to establish a framework and implementation plan for a more robust, financially viable transit system that is both cost-effective and customer-focused. The TSP includes a comprehensive, fact-based analysis of the existing system focused on service design and delivery, financial viability, and decision-making structures. The analysis also acknowledges the role external factors play in the long-term viability of the transit system, such as land use and transportation pricing, which are critically important as the region grapples with preparing the Sustainable Communities Strategy required by SB 375 (Calif. Statutes 2008, Chapter 728).

According to the most recent statistics compiled by MTC, paratransit accounted for only 5.4% of the total operating cost of public transit in 2009-10.<sup>2</sup> However, there is widespread concern that the cost of paratransit services, especially mandated ADA paratransit services, could skyrocket in coming years because of the expected aging of the population. Projections from the Association of Bay Area Governments indicate that the number of people age 65 and older in the Bay Area will grow by 75% by 2030, compared to only 19% for the population as a whole.<sup>3</sup>

This report provides an overview of paratransit services provided by Bay Area transit operators in compliance with requirements of the Americans with Disabilities Act (ADA). It includes:

- An explanation of the ADA paratransit requirements and their implications
- An inventory of ADA paratransit services and non-ADA paratransit services
- A description of how ADA paratransit works from both the operator and customer points of view
- Analysis of financial and operating trends
- Discussion of factors that are causing increases in the cost of providing ADA paratransit
- Strategies that have potential to enhance the sustainability of these services
- Analysis of the strategies based on experience in the Bay Area and around the United States.
- A recommended list of priority strategies

This report incorporates the contents of three preceding deliverables, a Paratransit Primer, a "Draft 1 Report" that described in detail strategies for making ADA paratransit more sustainable, and a "Draft 2 Report" that assessed each strategy based on experience in the Bay Area and around the U.S. Each of these reports was reviewed by a Technical Advisory Committee consisting of paratransit staff of the transit operators and one General Manager.

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<sup>2</sup> Statistical Summary of Bay Area Transit Operators, Fiscal Years 2005-06 Through 2009-10, Metropolitan Transportation Commission, June 2011

<sup>3</sup> Projections 2009, Association of Bay Area Governments.



## Chapter 2. ADA Paratransit Primer

### ADA Paratransit Requirements

The Americans with Disabilities Act of 1990 and its implementing regulations require that every public entity operating a fixed-route transit system shall provide paratransit or other special service to individuals with disabilities that is comparable to the level of service provided to individuals without disabilities who use the fixed-route system. The required service must be provided to “ADA paratransit eligible individuals,” which means people who are unable, due to a disability, to use the fixed-route service independently as determined by a process that each transit operator must establish.

The regulations (49 CFR 37.131) define what it means for the paratransit service to be “comparable” to the fixed-route service in terms of six criteria:

- **Service Area:** Service must be provided throughout corridors extending three-quarters of a mile around bus routes and rail stations. Small areas not inside any of the corridors but surrounded by corridors must also be served.
- **Reservations:** Reservations for trips on a given day must be taken up to the previous day, and, optionally, up to 14 days in advance, during normal business hours and comparable hours any day before a service day.
- **Fares.** The fare shall not exceed twice the full fare (i.e., without regard to discounts) for a trip of similar length, at a similar time of day, on the entity's fixed-route system. Companions may be charged the same fare as the ADA eligible rider, but personal care attendants must ride free.
- **Trip purpose restrictions.** There can be no restrictions or priorities based on trip purpose.
- **Hours and days of service.** The complementary paratransit service shall be available throughout the same hours and days as the fixed-route service.
- **Capacity constraints.** The availability of complementary paratransit service to ADA paratransit eligible individuals cannot be limited by trip caps, waiting lists, or “any operational pattern or practice that significantly limits the availability of service...”

The last criterion, “no capacity constraints” has been the most difficult for transit operators to comply with. Based on the language of the regulations and interpretations by FTA, it means that trip requests cannot be denied as long as they are made within the specified reservations hours for a trip within the service area and service hours; the only exceptions are rare, isolated incidents, and those that occur for reasons beyond the control of the operator such as a natural disaster. It also means that service must maintain high standards of on-time performance, trip length (time on board), and telephone availability.

The requirements regarding service area and hours and days of service mean that any expansion of the fixed-route service to cover new areas or longer hours must be matched by a similar expansion of ADA paratransit service. Note that the frequency of fixed-route service does not affect the ADA paratransit requirement: regardless of whether a route has hourly service or service every ten minutes the paratransit requirement is the same.

In some cases, the area three-quarters of a mile around transit routes may extend beyond the transit operator's jurisdiction. The regulations require these areas to be served unless the operator is legally prevented from doing so.

## Inventory of Paratransit Services

The principal focus of the paratransit element of the TSP is ADA paratransit. There are currently 19 ADA paratransit programs in the Bay Area, as listed in Figures 1 and 2. BART and AC Transit jointly provide ADA paratransit in the East Bay as the East Bay Paratransit Consortium. BART has agreements with several local transit systems, including San Francisco MTA and CCCTA to provide service corresponding to BART service in their areas. Marin County Transit and Golden Gate Transit jointly provide Whistlestop Wheels, with responsibility for Marin local and inter-county trips respectively. SamTrans has two paratransit services: Redi-Wheels for the urban areas along San Francisco Bay and RediCoast for the rural Coastside.

**Figure 1. ADA Paratransit Services – North Bay**

Transit Agency	Paratransit Service	Jurisdictions Served
Benicia Breeze*	Benicia Breeze Paratransit	Benicia and into Vallejo, Pleasant Hill, Concord, and Martinez
City of Petaluma	Petaluma Paratransit	Petaluma
City of Vacaville	City Coach Special Services	Vacaville
City of Vallejo*	Vallejo RunAbout	Vallejo
Fairfield/Suisun Transit	DART	Fairfield, Suisun City, into Vacaville and Vallejo
Golden Gate Bridge, Highway and Transportation District (Golden Gate Transit – GGT)	Whistlestop Wheels	Portions of Marin, San Francisco, Sonoma and Contra Costa Counties (inter-county)
Marin County Transit District	Whistlestop Wheels	Marin County (local)
Napa County Transportation Planning Agency (VINE)	VINE Go	Napa Valley: Calistoga, St Helena, Deer Park, Rutherford, Oakville, Yountville, Napa, American Canyon, portions of Vallejo in Solano County and portions of Santa Rosa
Sonoma County Transit	Sonoma County Paratransit	Sonoma County

\* Combined under Solano County Transit (SolTrans) as of July 1, 2011.

**Figure 2. ADA Paratransit Services – Central and South Bay**

Transit Agency	Paratransit Service	Jurisdictions Served
Central Contra Costa County Transit Authority (CCCTA - County Connection)	County Connection Link	Clayton, Concord, Danville, Martinez, Moraga, Orinda, Lafayette, Pleasant Hill, San Ramon, Walnut Creek, and unincorporated areas of central Contra Costa County
City of Santa Rosa (City Coach)	Santa Rosa Paratransit	Santa Rosa
City of Union City	Union City Paratransit	City of Union City and parts of Hayward, Fremont and Newark
East Bay Paratransit (EBP) Consortium (AC Transit and BART)	East Bay Paratransit	Western Alameda and Western Contra Costa Counties, and to and from San Francisco
Eastern Contra Costa Transit Authority (ECCTA - Tri-Delta)	Tri-Delta Dial-a-Ride	Antioch, Brentwood, Oakley, Pittsburg, and unincorporated areas of eastern Contra Costa County
Livermore Amador Valley Transit Authority (LAVTA)	Wheels	Livermore, Pleasanton, and Dublin
San Mateo County Transit District (SamTrans)	Redi-Wheels and RediCoast	San Mateo County and portions of San Francisco and northern Santa Clara County
Santa Clara Valley Transportation Authority (VTA)	Outreach Paratransit	Santa Clara County and immediately adjacent portions of San Mateo and Alameda counties
SFMTA (Muni)	San Francisco Paratransit	San Francisco and immediately adjacent portions of San Mateo County
Western Contra Costa Transit Authority (Westcat)	WestCAT ADA Paratransit	Pinole, Hercules, Rodeo, Crockett, Port Costa, Tara Hills, Montalvin Manor, Martinez, San Francisco, Del Norte BART station

For the most part each operator serves its own area, and passengers who want to travel between areas need to transfer, much as they would on fixed-route transit. The most common exceptions to this occur where operators' fixed-route services overlap. For example, Golden Gate Transit, BART, AC Transit, and SamTrans all have routes that run into San Francisco and they all provide corresponding ADA paratransit service. Some operators provide service beyond this basic requirement as a convenience to their riders, sometimes with financial cooperation of the neighboring operator. Notably, East Bay Paratransit provides service to anywhere in San Francisco with financial participation by San Francisco MTA. Whistlestop Wheels provides some trips beyond its strict ADA required area in San Francisco and Sonoma County under similar arrangements. SamTrans serves designated points in Santa Clara County.

The operators have also made provisions to help customers arrange transfer trips. One of these is the Regional Eligibility Database, which allows any operator to verify the eligibility of anyone

who has been certified as ADA paratransit eligible by any Bay Area operator. Based on an understanding reached by the operators some years ago, many of them will contact a neighboring operator to arrange transfer trips for their customers.

More generally, accessibility staff of a core group of Bay Area transit operators meet monthly as the Accessibility Committee of the Bay Area Partnership to share information and coordinate development of policies of a regional nature. This group oversees the ongoing maintenance and development of the Regional Eligibility Database through a contract with CCCTA.

In addition to ADA paratransit service, many areas have other paratransit services, sometimes provided by transit agencies but often provided by cities or other agencies. There are at least 32 non-ADA paratransit services operated by public agencies in the Bay Area. These services do things that ADA paratransit does not; for example they may serve areas where there is no fixed-route transit, they may provide trips based on same-day request, they may serve people who are not eligible for ADA paratransit, and they may provide a level of assistance that ADA paratransit does not.

These non-ADA paratransit services help meet the demand for specialized transportation in the Bay Area, serving trips for many riders who are eligible or likely eligible for ADA paratransit and who would otherwise increase the demand for ADA paratransit. A listing of known non-ADA paratransit services provided by public agencies in the Bay Area is provided as Appendix A.

## How ADA Paratransit Works – Customer View

A person who wants to make a round trip on ADA paratransit needs to become eligible, make a reservation for each leg of the trip, wait for the vehicle to arrive for each leg of the trip, and pay a fare for each leg of the trip. The process for completing these steps is governed by system policies set by each operator within the constraints of the ADA regulations. Key policies for eight sample Bay Area operators (the ones that participated on the Technical Advisory Committee for this project) are outlined in Figure 3.

**Figure 3. ADA Paratransit System Policies**

Transit Operator	Hours for reservations	Reservations Period	Fare (per one-way trip)	Pick-up Window
CCCTA	8:00 AM - 5:00 PM seven days a week	1 to 2 days in advance	\$4.00	30 min (15 min before and after pick-up time)
East Bay Paratransit (BART & AC Transit)	8:00 AM - 5:00 PM seven days a week	1 to 3 days in advance	\$4.00 for 0-12 miles \$6.00 for >12-20 miles \$7.00 for >20 miles	30 min
ECCTA	6:00 AM to 6:00 PM seven days /week	1 to 3 days in advance	\$2.25 \$4.50 if origin/destination is outside Tri-Delta ADA service area	30 min (15 min before and after pick-up time)
Golden Gate Transit and Marin Transit	8:00 AM - 5:00 PM seven days a week	1 to 7 days in advance	\$2 for Marin Local; \$2.50 Marin "extended" 6 fare zones for intercounty trips	30 minutes
SamTrans	8:30 AM - 5:00 PM seven days a week	1 to 7 days in advance	\$3.75	20 minutes + 10 leeway for schedule changes
San Francisco MTA	7:00 AM - 6:00 PM seven days a week	1 to 7 days in advance	\$2.00	5 minutes before to 15 minutes after the promised time.
Santa Clara VTA	8:00 AM to 5:00 PM seven days a week	1 to 3 days in advance	\$4.00	30 minutes
Sonoma County Transit	Monday - Friday 8:00 AM - 5:00 PM Saturday and Sunday 9:00 AM - 5:00 PM	1 to 7 days in advance	Varies by distance: 1st Zone tickets \$2.50; \$1 for each additional zone ticket	30 minutes

## Eligibility

Before using ADA paratransit, a prospective customer must apply and be determined eligible. The application must be made with the transit operator that serves the area in which the customer lives. Although all of the operators subscribe in principle to a Bay Area eligibility process, the ways they implement this process vary widely.

At some smaller operators, the process consists of filling out a paper application, which includes questions about the applicant's disability and capability of performing various functions needed to complete a trip on fixed-route public transportation. The application includes a release for a health care professional to provide information or in some cases a form that the applicant must have a health care professional complete. The transit operator then reviews the application and makes a determination of the applicant's eligibility.

After submitting the initial application, applicants living in areas served by larger transit systems may be required to undergo a "second level assessment." This may involve a telephone interview, professional medical verification, or an in-person interview. The in-person interview may include a functional test to determine the applicant's ability to take a public transit trip, for example, the ability to walk to a bus stop, read signs, etc. If the applicant needs transportation to a certification appointment, it will be provided at no cost to the applicant.

Regardless of the details of the process, the applicant is guaranteed by the ADA regulations to receive a determination within 21 days, or else be allowed to ride ADA paratransit until the determination is made. The determination may be: 1) not eligible for ADA paratransit; 2) conditionally eligible (eligible for some trips but not others that the applicant is capable of making on the fixed-route system); 3) eligible for all trips. The determination will also give an expiration date for eligibility, typically three years but sometimes shorter if the applicant's disability is temporary.

An applicant who is denied eligibility can appeal. Operators are required to have a formal appeals process. The decision in the appeals process must be made by a person not involved with the initial decision to deny eligibility.

## Reserving a Trip

A customer who wants to make an ADA paratransit trip must call the operator's reservations number at least one day in advance. Most operators accept reservations from 8:00 AM to 5:00 PM every day, but one has longer hours, and one has shorter hours on the weekend. Many operators also accept reservations up to seven days in advance, but several only take reservations two or three days in advance. Except at some smaller operators, the reservations agent will typically ask for the customer's paratransit ID number and check that the customer has current valid eligibility. The customer must provide full details of the trip to the reservations agent, including:

- Pick-up location
- Drop-off location
- Desired departure time or else an appointment time for the drop-off
- Whether the customer will be traveling with a wheelchair or other mobility aid, a service animal, a personal care attendant, or a companion

This information must be provided for each leg of the customer's desired travel, including the going trip, the return trip, and any intermediate trips. At least one operator permits the time of the return trip to be left open, but at a premium fare.



The reservations agent will provide an available pick-up time or window, which may vary from the one the customer requested by up to an hour earlier or later. If the customer is travelling to an appointment, the time offered cannot be one that would make the customer late for the appointment. If the customer is travelling from some activity with a definite completion time, such as work, the time offered cannot be before the customer is done with the activity.

Once the customer has agreed to the proposed pick-up time or window, the reservations agent will confirm all of the trip details, typically also providing a confirmation number.

## **Taking the Trip**

The rider needs to be ready to board during the entire 20 or 30 minute window during which the vehicle may arrive and still be considered on-time. Typically, it is the rider's responsibility to be alert for the vehicle's arrival, so they can begin boarding within five minutes. Depending on local policies, the vehicle may not actually be considered late unless it arrives more than 10 minutes after the window. If the vehicle arrives early, as sometimes happens, the rider needs to begin boarding within five minutes of the start of the window. Drivers provide some assistance, especially with boarding, limited help with packages, operating a wheelchair lift or ramp, and securing a wheelchair or scooter within the vehicle. Drivers typically also offer assistance to and from the door of a building if needed, but only if they can do so without losing sight of the vehicle. Systems have various policies about negotiating steps or ramps between the door of a building and the vehicle. Drivers are never supposed to go past the front door or vestibule of a building.

If the passenger is not ready to board within five minutes of the vehicle's arrival (or five minutes after the start of the window), the driver can proceed to the next scheduled pick-up or drop-off. Systems have various policies about what happens in this case. Usually the rider is counted as a "no-show" and riders who accumulate too many no-shows may be suspended from using the service for a period of time. Systems have various policies about whether they will send a second vehicle for a passenger who missed their ride, though most have a no-strand policy about return trips back to the rider's home.

Once the rider has boarded, the driver may make several stops to pick up or drop off others before bringing the rider to their destination. Policies vary about how long the trip can be. Federal guidance is that trips should not normally take longer than a similar trip on fixed-route transit.

## **Fare Payment**

In most cases riders pay for their trips when boarding the paratransit vehicle using cash or pre-purchased tickets. Riders on VTA/Outreach Paratransit pre-pay into an account maintained by the broker; the fare is automatically deducted from the account as each trip is taken. Users of San Francisco's Taxi Paratransit program pre-pay to add value to debit cards with which they pay for taxi rides.

## **How ADA Paratransit Works – Operator View**

Transit operators in the Bay Area provide ADA paratransit through contractors. The only exceptions to this are that many smaller transit agencies conduct eligibility assessments themselves. Most contract providers are for-profit companies, but Sonoma County, Marin County/Golden Gate, and VTA all contract with local non-profit organizations. The functions performed by contractors include:

**Eligibility.** Staff with training in the ADA eligibility rules review applications from prospective customers to determine if they meet the ADA rules that the individual be unable, due to a disability, to independently use fixed-route transit service for some or all trips. The details of this process vary from operator to operator. Some use a standard paper application, some require all or a portion of applicants to appear for an interview, some conduct interviews by telephone, and a few require some applicants to undergo functional testing. Three systems that have contracted brokers have those brokers conduct eligibility screening, while two systems contract for another company to conduct this function. In at least one case, the same non-profit provider that operates paratransit service also conducts eligibility screening. Other transit operators conduct eligibility screenings themselves.

**Reservations.** Calls are received, generally during normal business hours and similar hours on weekends, one or more days in advance by teams of call-takers who process trip requests using specialized software. For each trip request they check the caller's eligibility, determine whether vehicle space is available at the exact time requested, offer nearby alternative times in some cases, and confirm trip details.

**Scheduling.** During the same call when reservations are made, or in some cases at a later time, trips are placed on specific vehicle runs using specialized software that attempts to combine trips into efficient chains that make good use of vehicle time while meeting standards for on-time pick-ups and maximum ride time. Even when scheduling is done during the reservations call, schedules are usually adjusted to optimize performance closer to the day of service.

**Dispatching.** On the day of service, dispatchers monitor vehicle operations to ensure that service is delivered as planned. When customers are not ready for a pick-up, dispatchers may attempt to contact the customer. Typically a driver may not depart the pick-up location of a customer who is an apparent no-show without approval from a dispatcher. When customers call to find out the estimated arrival time of their assigned vehicle, dispatchers may contact the driver for this information or may rely on automated displays that show vehicle locations. (In some cases, these "where's my ride" calls may be handled by reservations call-takers.) Dispatchers reassign trips among vehicles when vehicles run late or break down, or when there is a need to return for a passenger who was not ready for a trip home.

**Vehicle operations.** Contract providers operate a variety of vehicles according to pre-established schedules and directions from dispatchers. Vehicles used in paratransit include small cutaway buses with lifts, minivans with ramps, sedans dedicated to paratransit service, and taxicabs. Vehicles are radio equipped for communication with dispatchers. In many cases, vehicles have GPS-based automatic vehicle location (AVL) equipment and mobile data terminals (MDTs) that permit digital communication with dispatchers. In many cases, the transit agency owns all or most of the vehicles, but in others the vehicle operations contractor owns vehicles.

**Maintenance.** Usually maintenance is provided by the same contractors that operate vehicles; however at least one transit agency provides all maintenance for the vehicles that it owns.

Contracting arrangements for these functions include the following variations (with examples from the eight operators that completed surveys for this project):

- A single contractor provides all functions. (Golden Gate / Marin County)
- A single contractor provides all functions except for eligibility review, which is performed either by the transit agency or a separate contractor. (SamTrans, CCCTA, ECCTA, Sonoma County)
- One contractor performs all functions except for vehicle operations, which it subcontracts to multiple companies. (AC Transit / BART, VTA)
- One contractor is responsible for all functions but performs only eligibility, quality control, and administrative functions directly, subcontracting to a variety of companies for all aspects of service operation. (San Francisco)

## Funding Sources

The ADA is not a Federal program; it is civil rights legislation that creates a mandate to provide service. Each operator must find funds to operate this service from the sources available. For the most part, these are funds that can also be used for fixed-route operations or capital needs. For operations, these funds include California Transportation Development Act (Articles 4 or 8) and State Transit Assistance (STA) funds. MTC allocates a portion of population-based STA funds for regional paratransit purposes.

Transit operators that receive FTA Section 5307 (Urbanized Area Formula Program) capital grant funds can use a portion of these funds for ADA paratransit operations; 10% of formula amount for each urbanized area in the Bay Area is set aside for ADA paratransit operations, except for a few operators that do not participate. For FY 2009-10, MTC Program of Projects set aside \$18.6 million in Section 5307 funds for ADA paratransit operations.

Most Bay Area counties also have local transportation sales taxes, and in many cases a portion of the sale tax proceeds go to support paratransit services. Passenger fares cover an average of about 8% to 9% of operating cost. Two operators provided breakouts that illustrate the types of funds used.

Sonoma County Transit estimated that fares cover about 9%, Measure M sales tax covers about 25%, and TDA and STA, which are variable from year to year, fill in the remaining 66% of the cost of operations. For capital funding, Sonoma County Transit uses FTA 5311 Rural Transit funding for 89% of costs and TDA for the remaining 11%.

San Francisco provided a detailed breakout as follows: Prop K sales tax - 46%, Section 5307 - 21%, BART - 7%, State Transit Assistance - 2%, San Francisco Department of Aging and Adult Services - 6%, and Muni Operating Budget -18%. The BART funds are for the cost of trips that correspond to BART fixed-route service in San Francisco.

VTA noted that its non-profit broker, Outreach, supplements transit funding with funds from local cities, grants, and donations and spreads among ADA paratransit and its other programs.



## **Chapter 3. Trends in ADA Paratransit**

### **Financial and Operating Trends**

For the region, the annual operating cost for paratransit in 2009-10 (the most recent year for which regional statistics have been compiled) was \$123 million, about 5.4% of the total operating cost for public transit of \$2.3 billion.<sup>4</sup> In the same year, paratransit provided about 3.8 million passenger trips, about 0.8% of the total public transit ridership of 494 million passenger trips. The average operating cost of a paratransit trip was \$32 compared to \$4.59 for public transit overall. A vehicle-hour of paratransit is much less expensive to provide than a vehicle-hour of public transit service overall, \$75 compared to \$190. However, the cost per trip on paratransit is higher because paratransit provides each passenger an origin-to-destination trip, rather than requiring passengers to come to established routes, so operators have been able to serve only 2.3 passenger trips in a vehicle-hour on average, compared to 41.5 for public transit overall.

Looking in more detail, there is great variation among transit operators. Financial and operating trends have been analyzed for four large operators and for four medium-to-small operators that are participating in the Technical Advisory Committee for this project. These large operators are:

- East Bay Paratransit (EBP)
- Santa Clara VTA
- San Francisco MTA
- Sam Trans

The medium-to-small operators are

- Central Contra Costa Transit Authority (CCCTA)
- Golden Gate Transit <sup>5</sup>
- Marin Transit
- Eastern Contra Costa Transit Authority ECCTA
- Sonoma County Transit

These operators completed a statistical questionnaire on which they provided data about operating and capital cost, ridership, and vehicle revenue hours of service from 2000 to 2010.<sup>6</sup> Based on this information, in the period from 2000 to 2010 operating cost grew by 66% for the four large operators and by 136% for the four smaller operators, as shown in Figure 4. In the same period, the Consumer Price Index for the San Francisco Bay Area increased by 26%. Since 2005, cost has increased by only 10% for the larger operators and by 27% for the smaller operators, compared to an increase in the CPI of 12%.

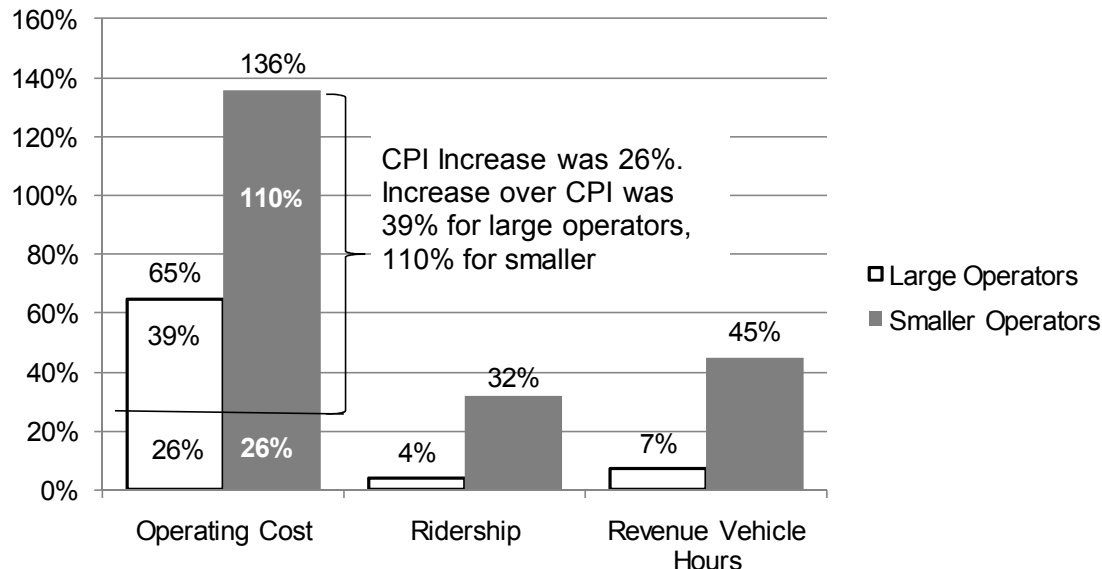
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<sup>4</sup> Statistical Summary of Bay Area Transit Operators Fiscal Years 2004–05 through 2008–09 May 2010, Metropolitan Transportation Commission, May 2010

<sup>5</sup> Although Golden Gate Transit is a large transit operator, its paratransit operation is small and combined with the operations of the Marin County Transit Authority.

<sup>6</sup> Most operators also provided limited data for Fiscal Years 2010-11 and 2011-12 (budgeted).

**Figure 4. Increase in Key Measures – 2000 to 2010**



Measure	Large Operators		Smaller Operators	
	2000 - 2010	2005 - 2010	2000 - 2010	2005 - 2010
Operating Cost	65%	10%	136%	27%
Ridership (total passenger trips)*	4%	-7%	32%	15%
Revenue Vehicle Hours*	7%	-11%	45%	9%
Increase in CPI	26%	12%	26%	12%

\*Data for SF MTA and GGT/Marin projected from data for 2001 to 2010

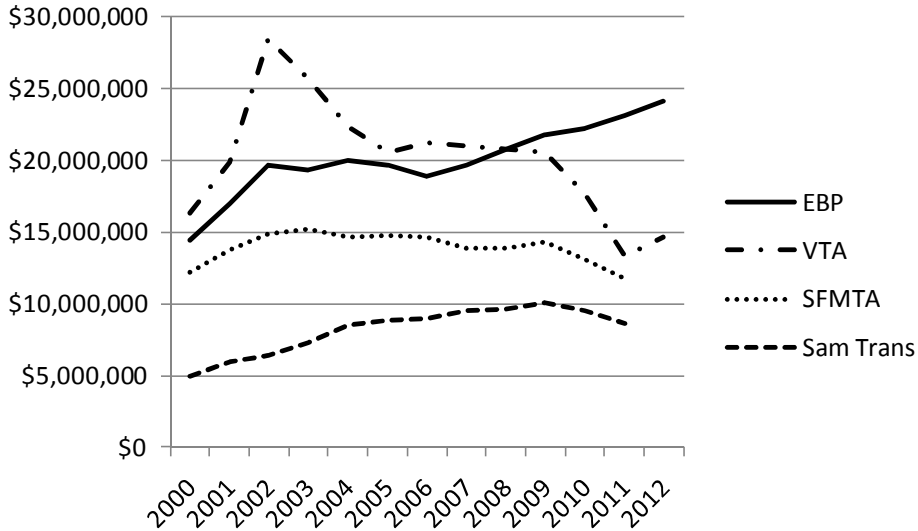
Some operators experienced very sharp growth in cost and ridership in the years 2001 to 2002 or 2003. This period coincides with a time when FTA became much more active in enforcing an interpretation that the ADA limit on capacity constraints that required zero or near-zero trip denials. Complying with this requirement resulted in increased ridership at some systems. Since then, for most of the large operators, growth in all measures has been more moderate or flat, or even negative, while for the smaller operators growth has continued with little interruption. For the large operators **operating cost grew by less than inflation** between 2005 and 2010, while for smaller operators **operating cost continued to outpace inflation, though by far less than the first half of the decade**. These trends are shown in a series of graphs labeled Figures 5, 6, 7, and 8.

Figure 5 shows that operating cost has been increasing more for most of the smaller operators than the larger operators. However, operating cost for both Sonoma County Transit and for Golden Gate Transit and Marin Transit's combined operation have leveled off since 2008. Among the large operators, both SamTrans and SFMTA have contained and reduced cost in recent years. VTA stands out for having reduced cost sharply in recent years; however, VTA's cost spike in 2002 and 2003 represents vehicle purchases by contract providers.

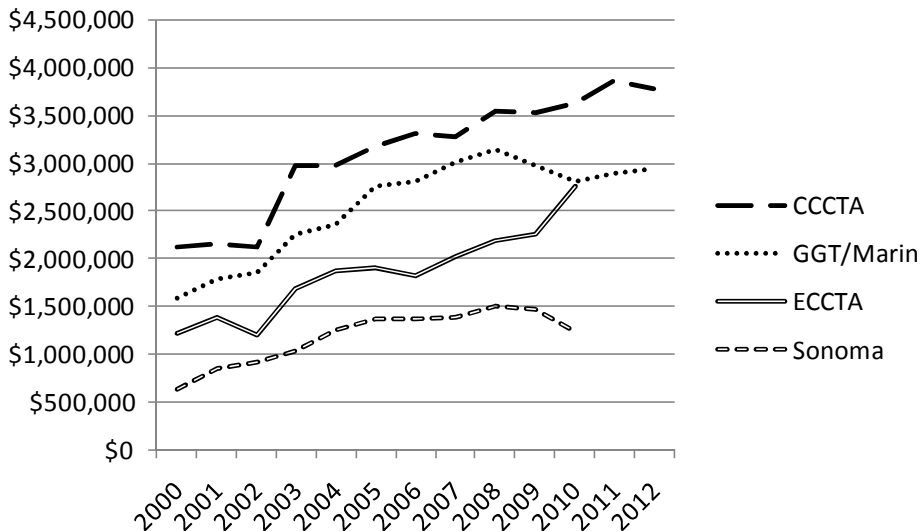
### Figure 5. Operating Cost Trends

(Inflation-adjusted operating cost, using 1997 as a base year)

#### Large Operators



#### Smaller Operators



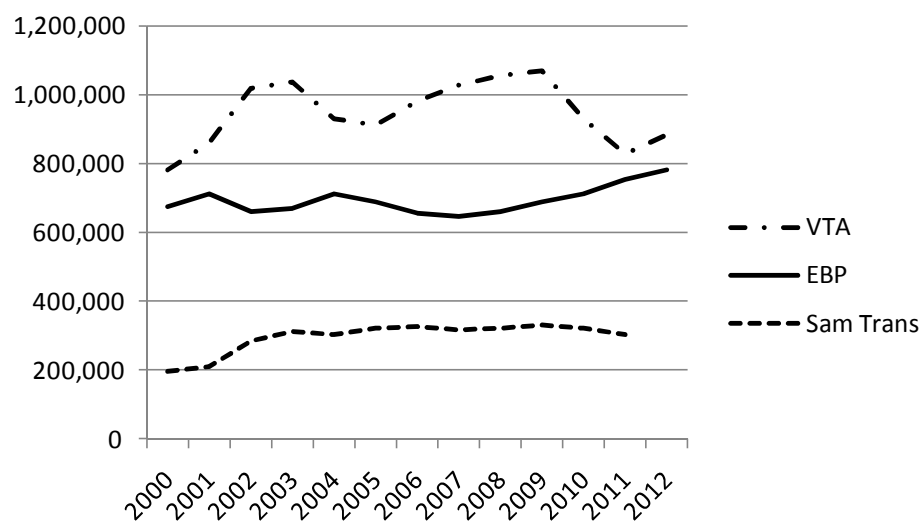
Notes: The pronounced spike in VTA operating costs reflects purchase of vehicles by contract operators that was included in operating costs prior to application of capital funds to this purpose in 2007. FY 2012 figures are from adopted budgets.

Figures 6 and 7 show ridership trends. Looking at ridership trends is complicated by different reporting methods. Some operators report only ridership for ADA eligible riders while others report only ridership including attendants and companions. Figure 6 shows trends for six operators that reported total ridership (including attendants and companions) for at least some years, while Figure 7 shows trends for six operators that reported only ridership by ADA eligible passengers. There has been more ridership growth at the smaller operators than the larger ones,

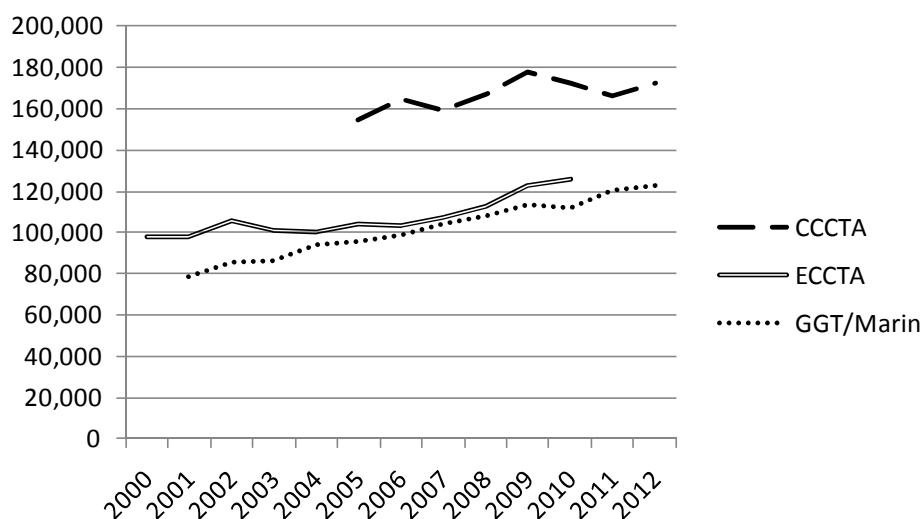
but most operators have seen a leveling off in the last few years. VTA's ridership has dropped particularly sharply. To a large extent the trends mirror those for operating cost. Differences among the large operators and the smaller ones may include more robust eligibility processes at the larger operators, and continuing population growth for most of decade in rural and low-density areas served by smaller operators, combined with more limited public transportation.

**Figure 6. Ridership Trends – Passenger Trips**  
 (Including Attendants and Companions)

#### Large Operators



#### Smaller Operators

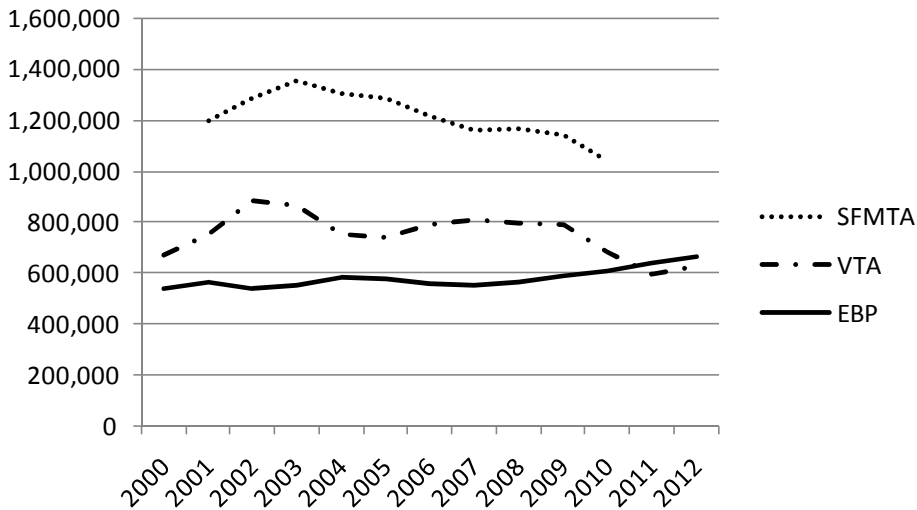


Note: SFMTA and Sonoma do not report passenger counts including attendants and companions. CCCTA began reporting this statistic in 2005. FY 2012 figures are from adopted budgets.

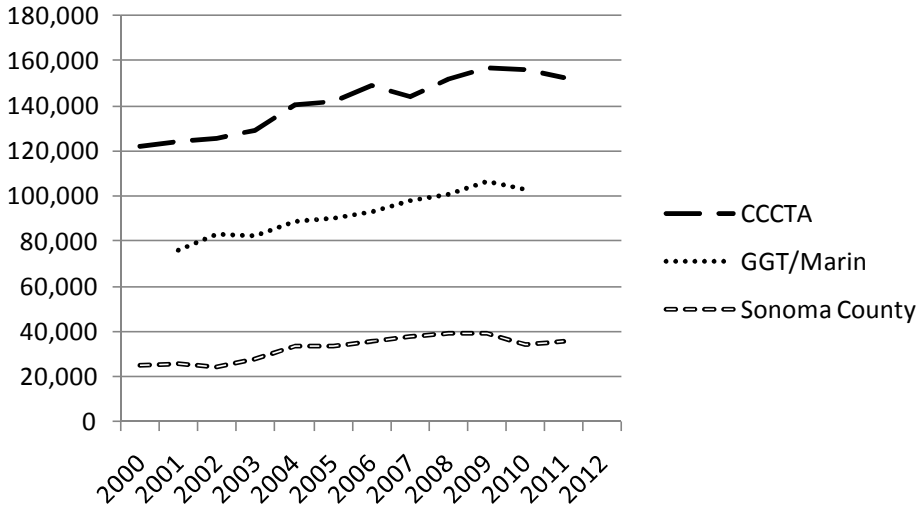


**Figure 7. Ridership Trends – Eligible Passenger Trips**  
(Excluding Attendants and Companions)

Large Operators



Smaller Operators

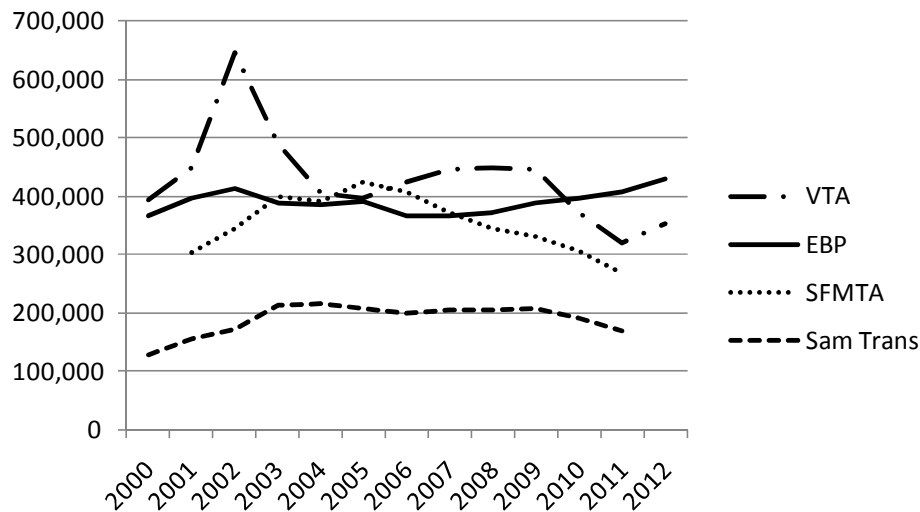


Note: SamTrans and ECCTA do not report passenger counts excluding attendants and companions. FY 2012 figures are from adopted budgets.

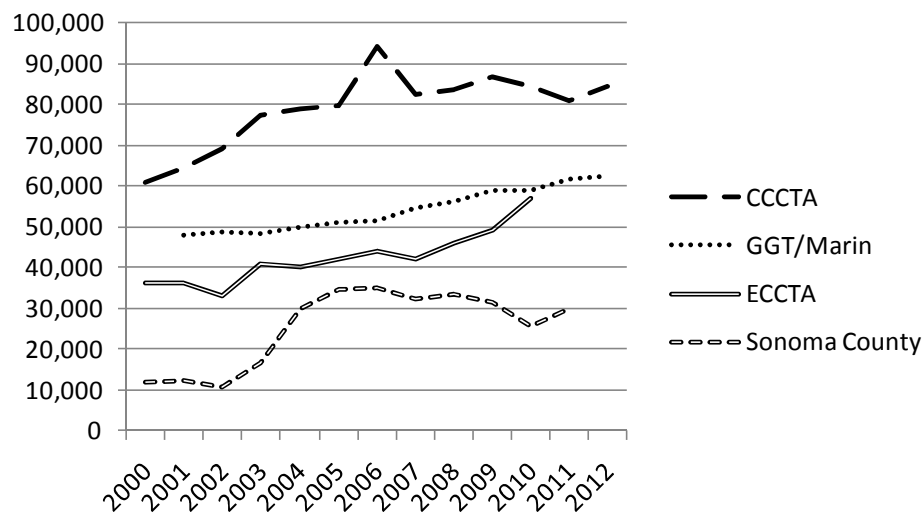
Trends in revenue vehicle hours, shown in Figure 8, largely mirror trends in ridership. Some spikes and sudden changes are unexplained, and may reflect changes in reporting methods.

**Figure 8. Revenue Vehicle Hour Trends**

**Large Operators**



**Smaller Operators**

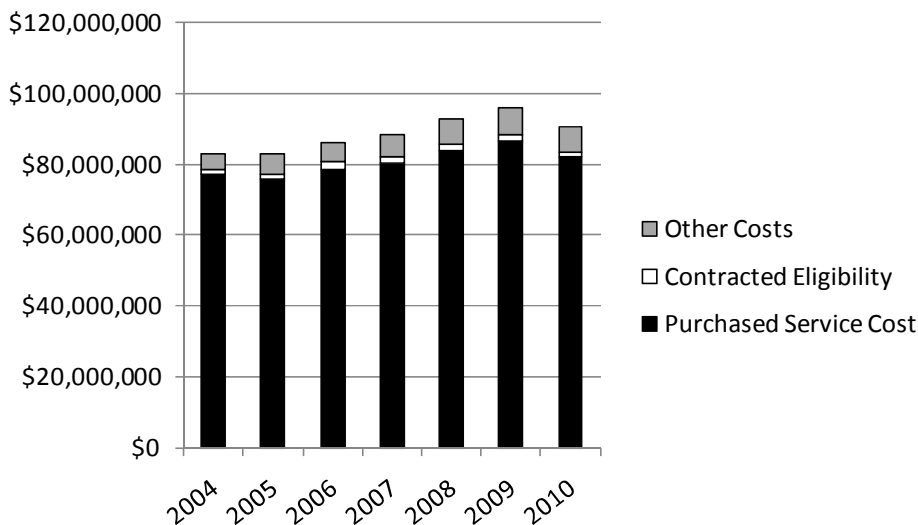


Note: FY 2012 figures are from adopted budgets.

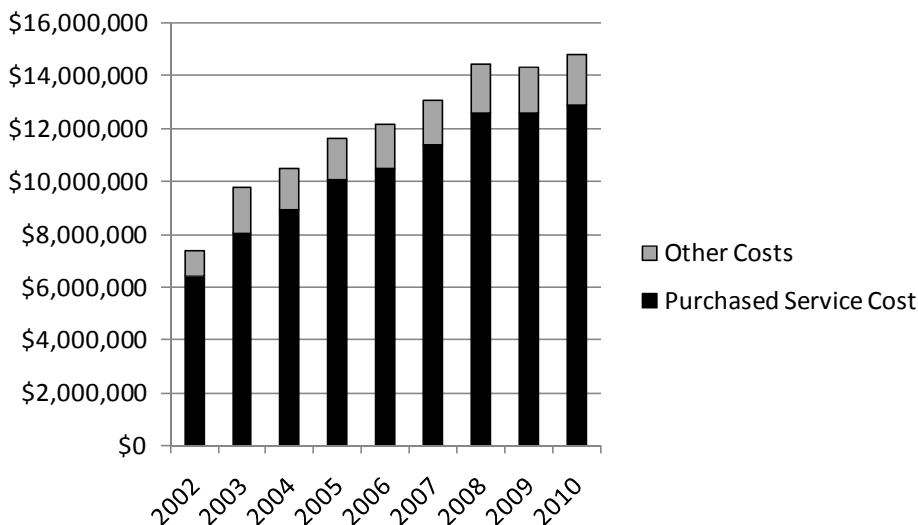
Most of the cost of ADA paratransit consists of amounts paid to contract providers, reported as “cost of purchased service.” Some operators do not keep track of the cost that is due to the portion of their staff time spent on issues related to ADA paratransit. Three operators, East Bay Paratransit, VTA, and SamTrans reported amounts that they pay contractors for ADA eligibility screening. Others either perform this function in-house or else it is included in the contract with the service provider. Figure 9 shows the portions of total cost that is due to purchased service costs, contracted eligibility, and other costs, including in-house activities if reported.

**Figure 9. Components of ADA Paratransit Cost**

**Large Operators**



**Smaller Operators**



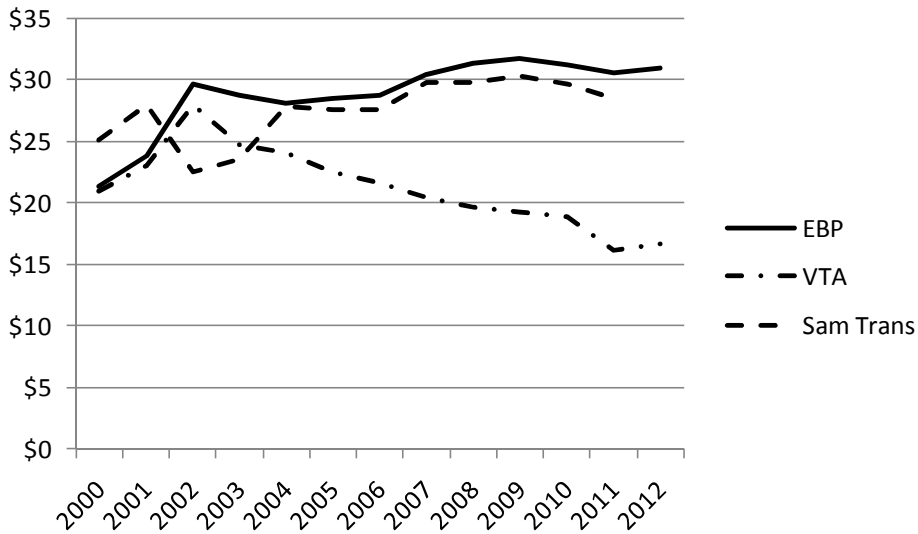
In 2010, purchased service accounted for 90.6% of the \$90.5 million total cost of ADA paratransit (including eligibility services) for the large operators and 87.1% of the \$14.9 million cost for the smaller operators. Contracted eligibility accounted for 1.5% of the total cost for large operators and 0% for the smaller operators. The balance, shown as “other costs” in the charts, in some cases may include things other than in-house activities due to agency-specific arrangements such as fare revenue deducted from payments to contractors. Six agencies reported specific amounts as “transit agency costs” and these averaged about 3% of total operating cost for the large operators and about 4% for the smaller operators. Some transit agencies, such as San Francisco and the East Bay Paratransit Consortium contract out even most of the administrative functions related to paratransit and have very minimal in-house costs. San Francisco considers only the amounts that its contracted broker pays to service providers as “purchased service cost”; the amount that the broker spends on administrative activities like monitoring contracts, selling tickets, and eligibility is counted as “other.” The agency with the highest level of in-house cost is SamTrans, which provides fuel and maintenance for agency-owned vehicles, items which are included in purchased service costs for other operators.

Since cost has risen more than ridership, it is clear that operating cost per passenger trip has increased. However, most of that increase occurred between 2000 and 2005. More recently, cost increases have moderated. After adjusting for inflation, most operators have small or no increases in cost per trip, and some have been able to reduce cost per trip (see Figures 10 and 11). VTA stands out for having achieved a steady reduction in cost per trip.

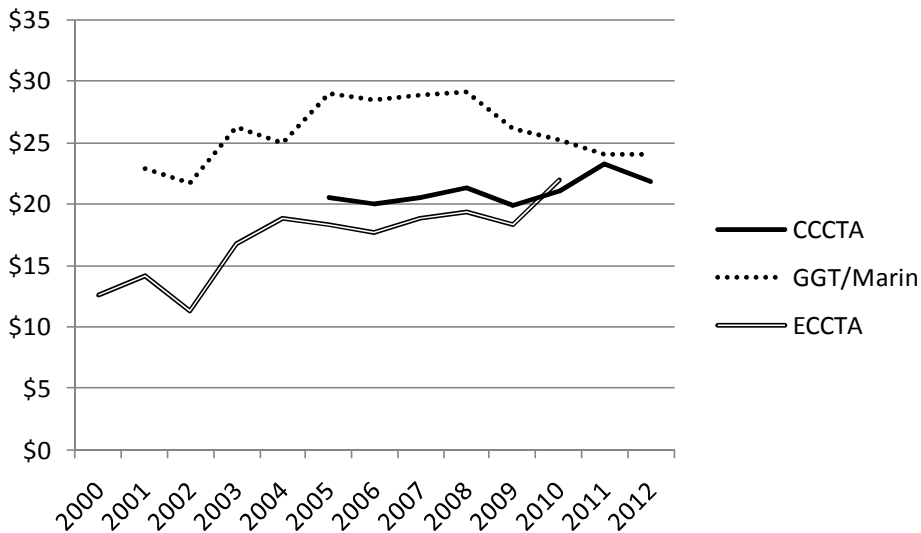
**Figure 10. Operating Cost per Passenger Trip**

(Inflation adjusted, including attendants and companions)

**Large Operators**



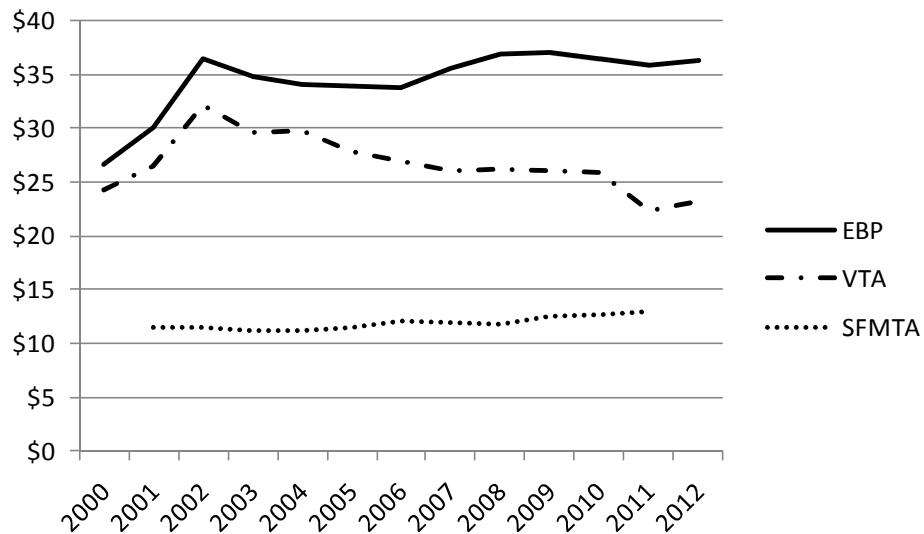
**Smaller Operators**



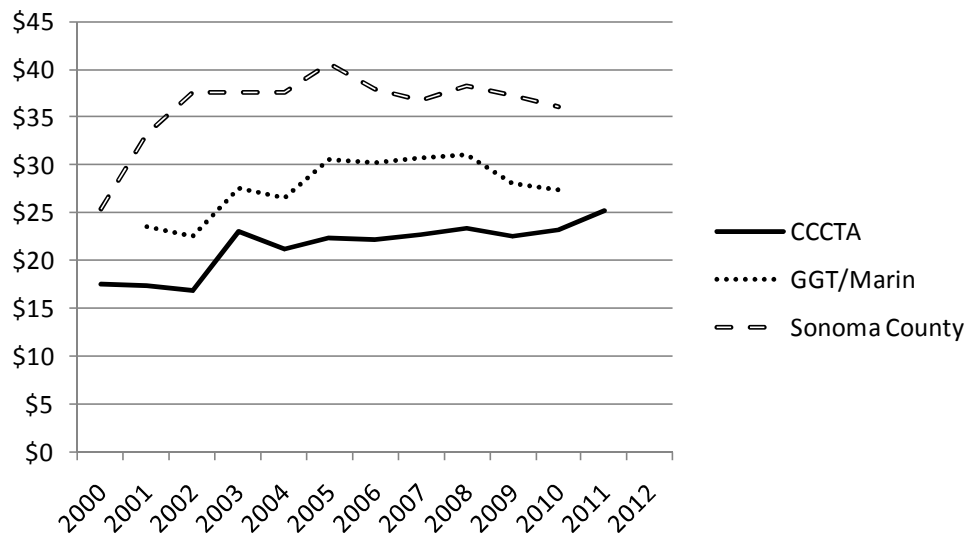
Note: SFMTA and Sonoma do not report passenger counts including attendants and companions. CCCTA began reporting this statistic in 2005. FY 2012 figures are from adopted budgets.

**Figure 11. Operating Cost per Eligible Passenger Trip**  
 (Inflation adjusted, excluding attendants and companions)

**Large Operators**



**Smaller Operators**



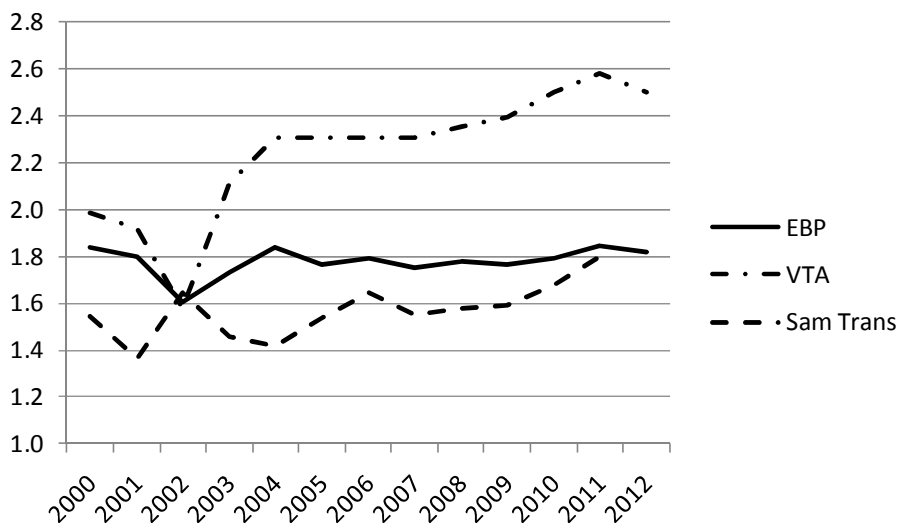
Note: SamTrans and ECCTA do not report passenger counts excluding attendants and companions. FY 2012 figures are from adopted budgets.

The operators' success in controlling cost per trip could be due to improving productivity, controlling the amount paid to contractors for a vehicle hour or trip, or some combination of these. As shown in Figures 12 and 13 many operators, including SamTrans and VTA, have been able to improve productivity (measured as passenger-trips per revenue vehicle hour), while others have maintained about even productivity levels. Note the trends appear somewhat different depending on how passenger trips are reported.

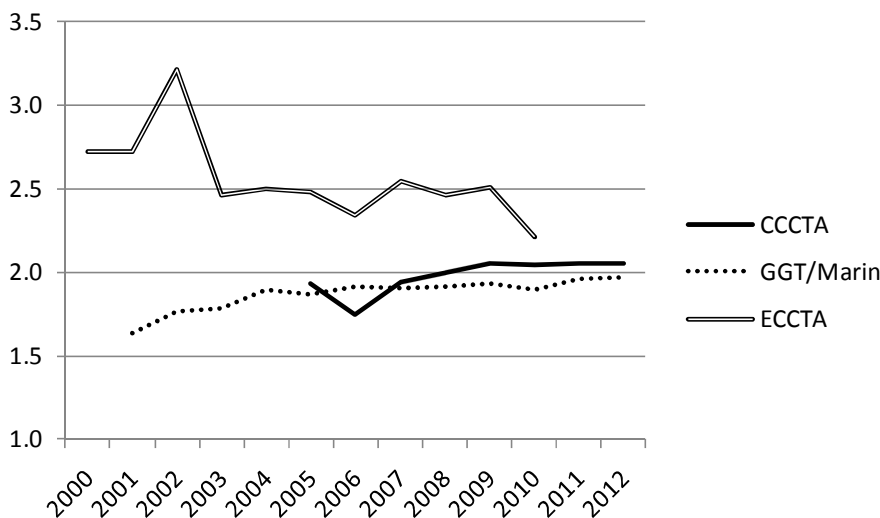
**Figure 12. Passenger Trips per Revenue Vehicle Hour**

(Using total trips, including attendants and companions)

Large Operators



Smaller Operators

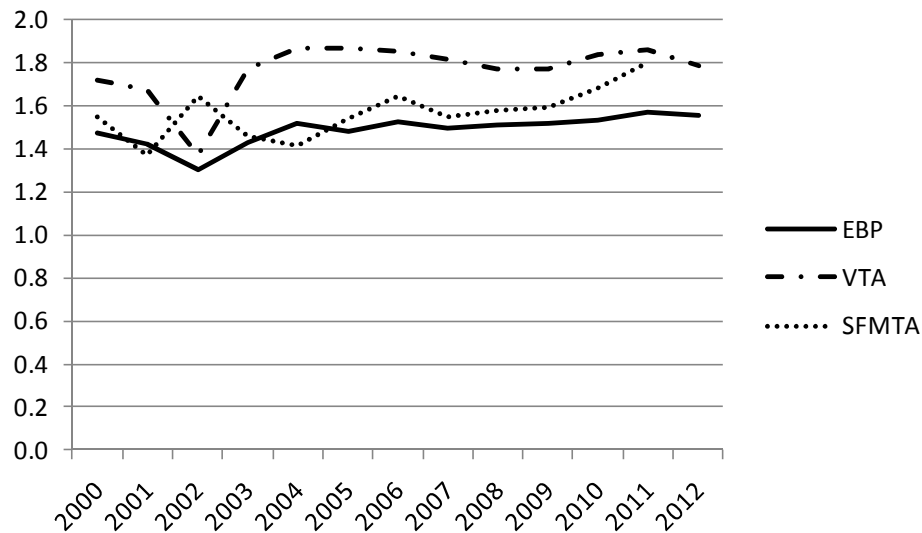


Note: SFMTA and Sonoma do not report passenger counts including attendants and companions. CCCTA began reporting this statistic in 2005. FY 2012 figures are from adopted budgets.

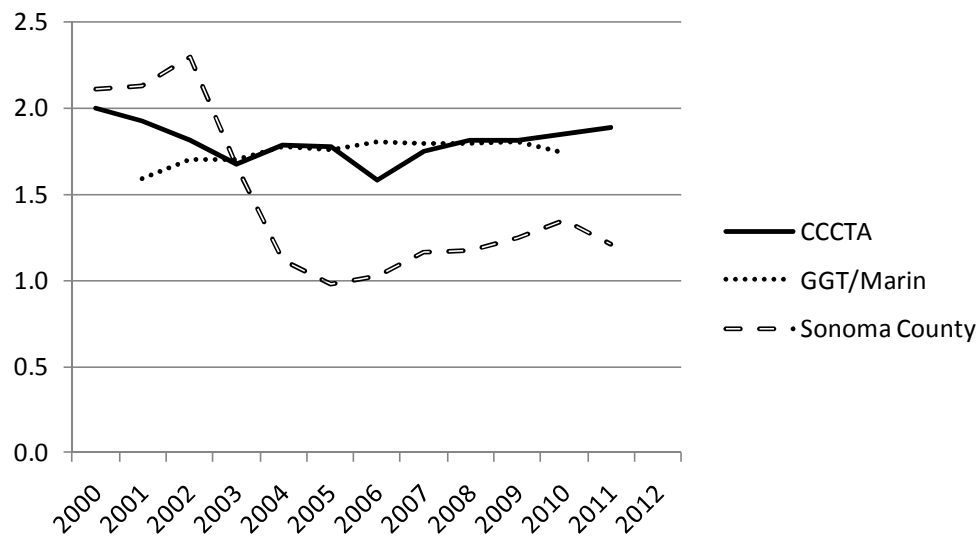
**Figure 13. Eligible Passenger Trips per Revenue Vehicle Hour**

(Excluding attendants and companions)

**Large Operators**



**Smaller Operators**



Note: SamTrans and ECCTA do not report passenger counts excluding attendants and companions. FY 2012 figures are from adopted budgets.

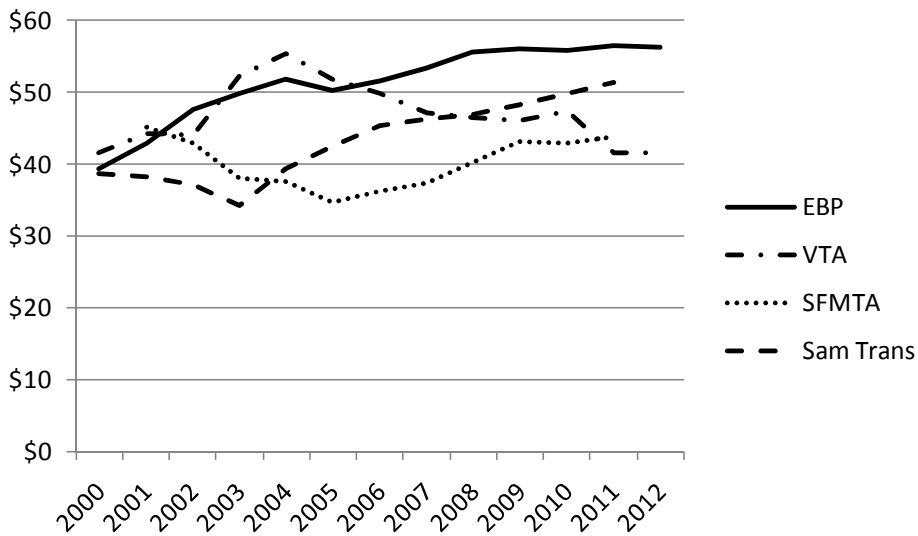


Looking at cost per revenue-vehicle hour (Figure 14), most operators have been able to keep increases to about the level of inflation, although a few have been able to reduce inflation adjusted cost per revenue vehicle hour.

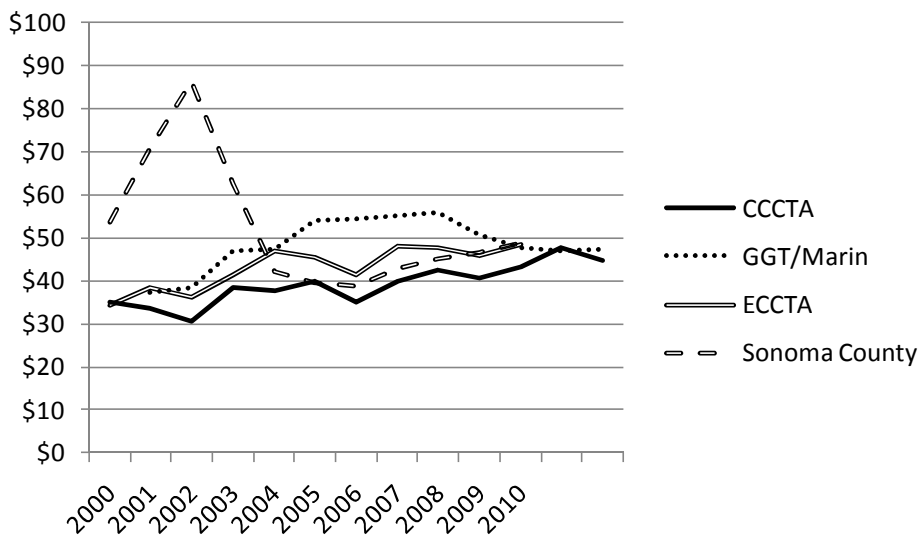
In summary, through a combination of demand management, productivity improvements, and controlling contract rates, most operators have been able to control the operating cost of ADA paratransit.

**Figure 14. Inflation Adjusted Operating Cost per Revenue Vehicle Hour**

Large Operators

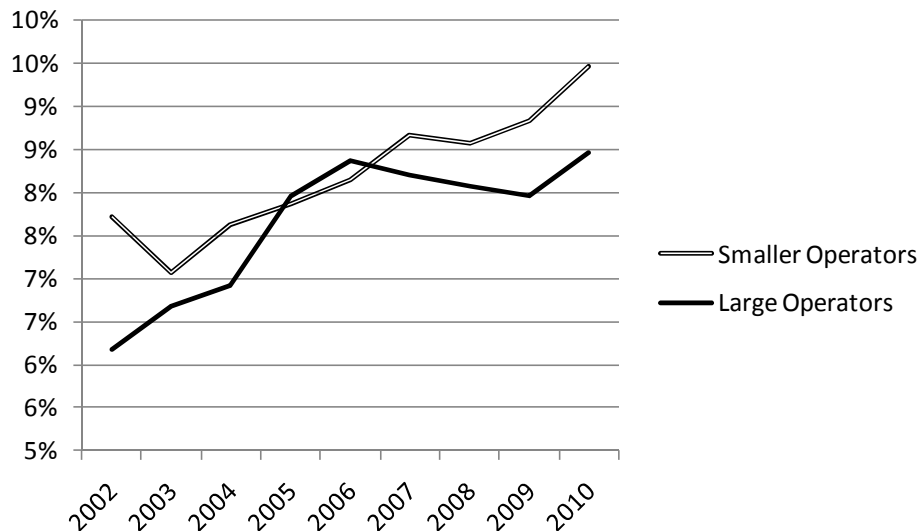


Smaller Operators



Fare revenue covers about 8.5% of the cost of ADA paratransit for the large operators and 9.5% for the smaller operators. This percentage has grown steadily as the operators have raised fares. These trends are shown in Figure 15.

**Figure 15. Farebox Recovery**



**Figure 16. Fares and Farebox Recovery in 2010\*\***

System	Average Fare Revenue per Passenger Trip	Farebox Recovery
CCCTA	\$3.37	11.3%
EBP	\$2.96	6.7%
ECCTA	\$3.42	11.0%
GGT/Marin	\$2.42	6.8%
Sam Trans	\$2.11	5.3%
SFMTA	\$1.86*	10.4%
Sonoma	\$3.54*	6.9%
VTA	\$2.98	11.1%

\*Without attendants and companions.

\*\*SamTrans data from MTC Statistical Summary of Bay Area Operators. Others from surveys completed for this project.

## Capital Cost

Capital costs fluctuate greatly from year to year, as shown in Figure 17. Most capital expenses for paratransit are to purchase vehicles which have not been spaced out evenly. Some operators began using capital funds for vehicle purchases, instead of paying for them through operating contracts, during the period shown. The Large System figures also include \$3.7 million for the debit card system used by San Francisco in its taxi subsidy program. Figure 14 does not include

\$860,000 spent by East Bay Paratransit between 2006 and 2010 for MDT/AVL units. Some vehicles used in paratransit service are purchased by contractors rather than by transit agencies using capital funds. In the case of for-profit contractors, these expenditures are not necessarily charged to capital grant funds. In the case of non-profit providers (Outreach for VTA, the Marin Senior Coordinating Council for Marin Transit and Golden Gate Transit, and the Volunteer Center for Sonoma County Transit), the provider can obtain vehicles directly through the FTA Section 5310 program. In many cases contract providers lease an operating facility as well. Where a transit agency provides an operating facility for its paratransit contractor, it is often combined with a facility used for fixed-route bus operations, with no specific amount attributed to paratransit.

**Figure 17. Capital Expenditures**

Year	Large Systems		Small Systems	
	Cost	Systems Reporting	Cost	Systems Reporting
2001			\$770,800	2
2002	\$2,300,192	1	\$599,081	2
2003	\$615,486	3	0	1
2004	\$111,697	2	\$1,156,124	2
2005	\$1,641,022	2	\$13,991	2
2006	\$1,218,974	2	\$1,653,160	3
2007	\$7,396,916	3	0	1
2008	\$6,318,256	2	\$4,452,600	2
2009	\$3,432,777	4	\$290,000	2
2010	\$1,947,339	3	3,192,000	1

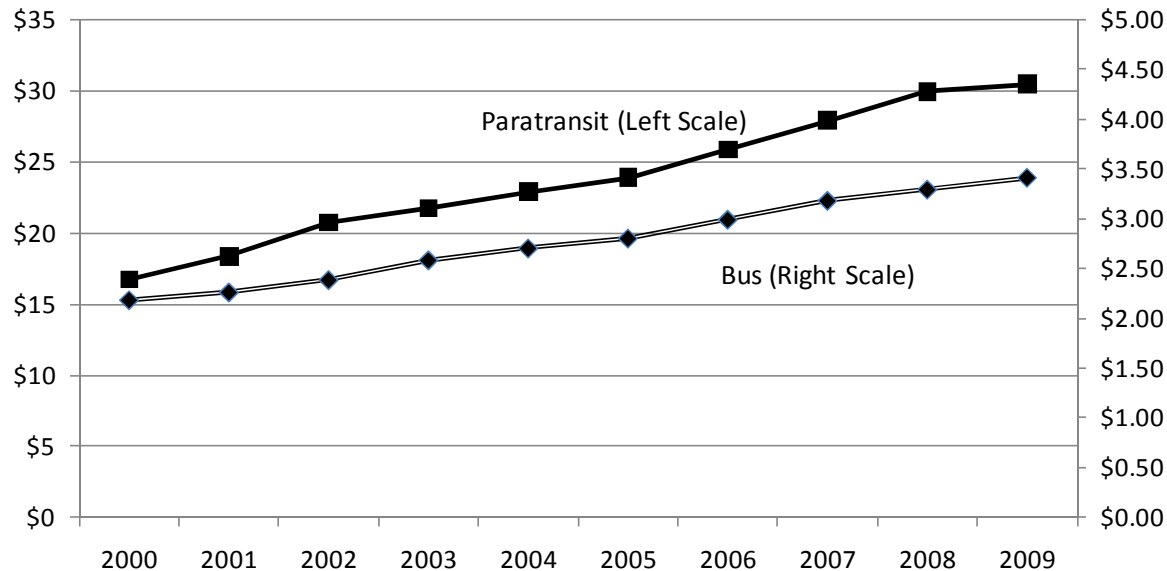
## Factors Affecting the Cost of ADA Paratransit

The operators provided observations about the factors that they see increasing the cost of ADA paratransit. This has been supplemented with information from national data sources and other transit systems.

The cost to public transit agencies for providing required ADA complementary paratransit services has increased less in the Bay Area than in the rest of the United States. The national increase is reflected in data available through the National Transit Database (NTD). According to NTD data from transit agencies in urbanized areas, operating costs for the “demand response” mode, which primarily includes ADA paratransit, increased 117% between 2001 and 2009. This can be compared to a 55% increase in fixed-route bus operating costs over the same nine-year time period. In the same period, paratransit operating cost increased 92% in the Bay Area according to regional statistics reported by MTC.

The national data, graphed in Figure 18, also show that paratransit cost per passenger-trip nationally have increased much more than in the Bay Area. From 2000 to 2009, the cost per trip for demand response/ADA paratransit increased by 82% from \$16.74 to \$30.47. This is a significantly greater increase than experienced for fixed-route bus service, which saw a 56% increase over the same time period. In the Bay Area in the same period, cost per demand response passenger increased by just 31% according to regional statistics reported by MTC.

**Figure 18. Operating Cost per Passenger Trip - National Trend**



Source: National Transit Database (all Demand Response trips)

Broadly speaking, rising costs can stem from three types of factors: rising demand, rising costs for operating vehicles (e.g. cost per vehicle hour), and falling productivity, meaning it takes more vehicle time to provide the same number of rides. As seen earlier, in the Bay Area:

- Demand for ADA paratransit has been increasing for the smaller operators but not for most larger ones;
- Most operators have been able to control increases in the cost of a vehicle-hour of service to about the level of inflation, and a few have been able to reduce the inflation-adjusted cost per revenue vehicle hour; and
- After some fluctuation in the early 2000s, most operators have been able to maintain or increase productivity, measured as passengers per revenue vehicle hour.

The operators have taken a variety of actions to control these factors, which are discussed in the next section. The rest of this section provides a review of trends noted by the operators and similar trends observed nationally.

## Rising Demand

While the long term trends appears to be one of rising demand, some operators have seen a recent drop ridership in response to a weak economy, program policy changes, and the closing of some social service, adult-day care, and medical clinics following state budget decisions. Aggressive promotion of alternatives to ADA paratransit may also contribute to moderating demand levels at some operators. At the same time, demand for one large operator and all the smaller ones continues to increase, and the long-term trend, including demand from human service programs, is likely to be for further growth.

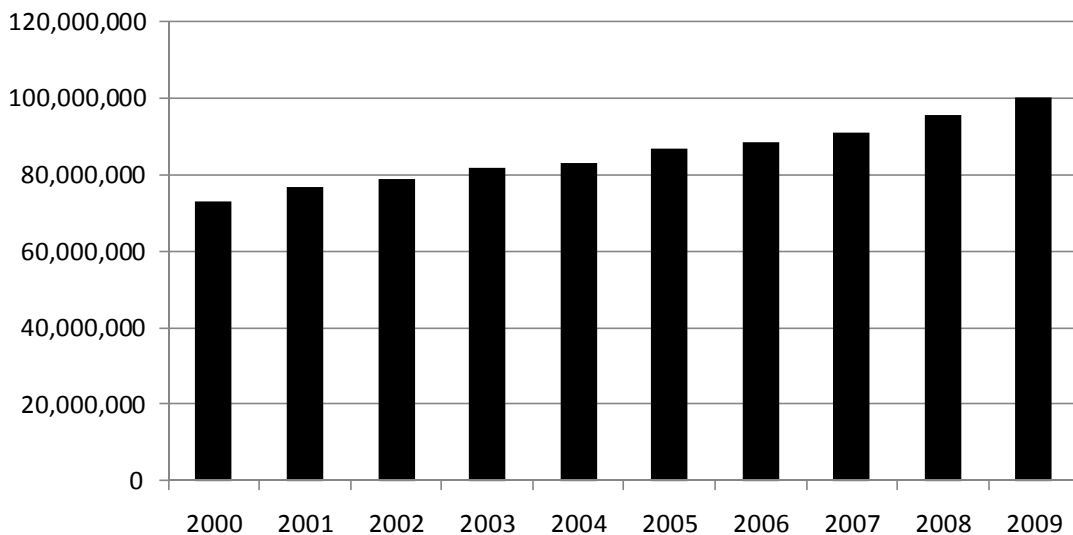
Nationally, there has been a sharp increase in demand for ADA paratransit service which must be served because of the ADA mandate prohibiting any “capacity constraints” that limit or discourage demand. Other factors include demographic changes, in particular the so-called “age wave” due to aging of the Baby Boomer generation; the continuing impacts of mainstreaming persons with

disabilities; increasing numbers of persons with kidney disease, many of whom need paratransit services for dialysis treatment when the disease is advanced; the shifting of trips from human service agencies who may find ADA paratransit service a preferred option for their clients over direct agency-provided transportation; and improvements to the quality of ADA paratransit service. The national growth trend may be heavily influenced by the fact that some large transit operators (none in the Bay Area) have had to add enormous amounts of service as a response to service improvements made following legal action or FTA compliance reviews. Examples include Baltimore, Chicago, and Washington, DC.

Statistics from the National Transit Database clearly demonstrate the increased demand for ADA paratransit service. NTD data show a 37% increase in demand response/ADA paratransit trips nationwide, from 73.2 million in 2000 to 100.2 million in 2009 (see Figure 19). National data for 2010 is not yet available, so it is not known whether the economic downturn or other factors may have reduced demand growth. In the Bay, total paratransit demand has increased by 47% in the same period, from 2.8 million trips to 3.8 million trips. But in the period from 2005 to 2010 demand fell by 7% for the four largest operators, while it grew by 27% for four smaller operators.

Significantly, ADA regulations stipulate that transit agencies must meet all demand for ADA paratransit service. The term "zero denials" is commonly used and typically practiced by transit agencies, though the regulations and subsequent court decisions do allow for insubstantial numbers of denials of service as long as such denials are not attributed to the design of the paratransit system. The ADA regulations also prohibit specific practices that constrain or limit the demand for paratransit service.

**Figure 19. National Growth in Paratransit Trips, 1996 – 2009**



Source: National Transit Database (all Demand Response trips)

With growing demand that cannot be capped or constrained, transit agencies must continue to add capacity to meet the demand. This may be challenging not just because demand may grow significantly from the early months of a transit agency's fiscal and budgeted year to the latter months, but also because demand varies by time of day and day of week. Transit agencies that rely on dedicated vehicles must have provisions to add additional vehicles and capacity after the

start of a fiscal year, or else arrange with other providers, such as taxi companies, to provide the overflow trips beyond what the dedicated fleet can handle.

## Demographic Changes

Population increases and demographic trends are growing the ranks of older adults, many of whom need the specialized transportation provided by ADA paratransit. From 2010 to 2030, the population of older adults age 65 and above in the Bay Area is projected to grow by 75%, more than four times as fast as the population as a whole, which is projected to grow by about 19%.<sup>7</sup> The trajectory of the “age wave” has begun. Older adults account for a large part of ADA paratransit ridership, but not the majority in most systems. For example, VTA compiled data for 2008-09 showing that 60% of active riders are 65 or older, but only 48% of trips are taken by riders 65 or older. In other words, the average older rider makes fewer trips than the average younger rider.

Increasingly, older adults are healthier and disability rates are declining in the older population as a whole. Yet at the same time, life spans are increasing and the tending of disability to increase with age results in more people with disabilities. Moreover, longer life spans often mean older adults are living beyond the time when they stop driving. This, coupled with the increased rate of disability at older ages, contributes to the increasing demand for ADA paratransit. Based on these trends, research for the American Public Transportation Association projects that the demand for ADA paratransit by people age 65 and older will grow by 32% between 2010 and 2020.<sup>8</sup> However, there is other evidence that increasing numbers of older people may have a less dramatic impact on ADA paratransit demand. A 2007 analysis for the Transit Cooperative Research Program found that ADA paratransit demand is related to total population in a transit operators service area but not to the size of the older population.<sup>9</sup> The director of Outreach in San Jose notes that increasing numbers of older people in past decade has not resulted in higher ridership because most older people prefer other transportation options if those are made available.

Recent research by AARP<sup>10</sup> has also found a substantial increase in the number and percentage of older adults with disabilities living in community settings as opposed to living in institutions. The research additionally documented that those older adults living in community settings have higher levels of disability which will require more ADA paratransit services so that these older and disabled persons can travel within the community. This trend echoes demographic trends and contributes to the increasing demand for ADA paratransit

## Continuing Impacts of Mainstreaming Persons with Disabilities

Public policies over the past few decades have supported independent living for persons with disabilities in community settings. The “mainstreaming” movement evolved during the 1960s and 1970s, with de-institutionalization of individuals with developmental disabilities or with mental illness who had been living in large state hospital settings. Moving these individuals into the community required various arrangements for transportation, including use of private companies. In California, for example, many of the Regional Centers, established to oversee community-based living with programs for persons with developmental disabilities, also provided

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<sup>7</sup> Association of Bay Area Governments, “Projections 2009.”

<sup>8</sup> “Funding the Public Transportation Needs of an Aging Population,” Nelson\Nygaard Consulting Associates, APTA 2010.

<sup>9</sup> “Improving ADA Complementary Paratransit Demand Estimation,” TCRP Report 119, Nelson\Nygaard Consulting Associates et. al, Transportation Research Board, 2007.

<sup>10</sup> “Older People with Disabilities Living in the Community: Trends from the National Long-Term Care Survey, 1984-2004,” D. Redfoot, et al., AARP Public Policy Institute, Washington, DC, Sept. 2010.

transportation for clients from their homes to day activity centers and back again on a daily basis. When the ADA passed and transit agencies began providing complementary paratransit, many of these clients became ADA-eligible and used the transit agency's paratransit service for their daily transportation, often with cost savings for the Regional Centers.

Significant proportions of riders on ADA paratransit are individuals with developmental disabilities or mental illness living in the community. A 2005 study in Orange County, CA found that one-third to two-fifths of trips on the transit agency's ADA paratransit service supported clients of Regional Centers and workshops.<sup>11</sup>

In the Bay Area some Regional Centers have maintained very active transportation programs, while also encouraging clients to use ADA paratransit as much as possible. Recently, with the pressure of budget cuts, Regional Centers are cutting back their transportation programs and increasing use of ADA paratransit. These trends are discussed further under the next heading.

## **Growth in Trips from Human Service Agencies**

In addition to the ongoing impacts of mainstreaming persons with disabilities, some transit agencies have seen a growing number of trips formerly provided by human service agencies.

This increase appears to result from at least two factors:

- **Trip shifting:** With the availability of ADA paratransit and its mandate to meet all trip needs for eligible riders, human service agencies may refer clients to the transit agency to obtain ADA paratransit eligibility. This allows the agencies to devote greater resources to their primary social service mission. The trend is also related to mainstreaming, as social service providers see benefits in introducing their clients to public transit service, as opposed to reliance on specialized transportation provided by the human service agencies.
- **Retrenchment:** Facing increasingly limited budgets because of current economic conditions, human service agencies are not able to grow their transportation service despite increasing demand. Thus, they scale back to serving only existing clients and do not advertise their transportation service.

In California, as noted above, Regional Centers have been cutting back their transportation programs. Some Bay Area operators have already seen this have an impact on their ADA paratransit programs. East Bay Paratransit noted that the Regional Center of the East Bay has been buying large numbers of tickets for its clients to ride ADA paratransit, including some clients who have behavior conditions that make it difficult for them to use ADA paratransit. As part of cost cutting measures included in the 2011-12 State budget, Regional Centers are now required to prepare "transportation access plans" for their clients that include use of public transportation, which would include ADA paratransit, and "generic transportation services." MTC submitted comments on the proposal that led to this legislation noting concerns about the qualifications and objectivity of teams preparing these transportation access plans, noting that fixed-route transit is the most cost effective and inclusive means of transportation for many Regional Center clients, and noting that transit agencies are ready to partner with Regional Centers on travel training programs.<sup>12</sup>

ECCTA staff also report seeing "overwhelming" numbers of trips formerly carried by human services agencies. In addition to clients who had private contracted services from the Regional Center of the East Bay being transitioned to paratransit, they are also seeing housing facilities,

<sup>11</sup> "Paratransit Growth Management Study," for the Orange County Transportation Authority, by A-M-M-A et al., 2004.

<sup>12</sup> Letter from Ann Flemer to Terri Delgadillo, Director, Department of Developmental Services, "Comments on DDS Proposals to Achieve \$174 Million General Fund Savings," May 16, 2011.

board and care homes, and skilled nursing and assisted living facilities moving clients onto ECCTA services. Marin Transit noted trips being shifted from adult day programs. East Bay Paratransit staff also note that some adult day facilities have shifted trips to ADA paratransit.

Some agencies, including Outreach, Marin Transit, and East Bay Paratransit report efforts to work with Regional Centers to share capacity.

Similar trends are occurring in other parts of the country. Research by the consulting team in one large eastern metropolitan region has found a significant restructuring of trips with specialized needs. In a seven-year time period, total trips provided by the region's human service agencies and human service programs funded by local jurisdictions decreased 9%, from 2.1 million trips in 2003 to 1.9 million in 2010. Over the same nine years, trips on the region's ADA paratransit service grew from 1 million to 2.4 million, an increase of 144%. Discussions with several local human service agencies confirmed the trend, with one agency stating that it formerly operated 22 to 23 "routes" that transported clients to and from the agency's day programs but with the availability of ADA paratransit, reduced its own service to nine routes. This transition did not happen all at once but over time, and the shifts corresponded to the quality of the ADA paratransit service. According to this agency, when service quality declined several years ago, the agency maintained the then-level of its own transportation program and when quality improved, it continued to shift trips to the public transit agency.

Research in the same metropolitan area has found some human service agencies have shuttered their transportation programs, due in large part, it appears, to the current recession. While this does not appear to be a large-scale phenomenon, persons who had used these programs to meet their local trip needs had to turn elsewhere for transportation. The data suggest that they turned to the public transit agency's ADA paratransit service.

## **Increase in Demand for Dialysis Transportation**

An increase in demand for transportation to dialysis treatment is another factor driving the demand for ADA paratransit. Many of the individuals needing dialysis treatment are also elderly and have other medical complications, so that ADA paratransit services are often needed. Dialysis, which replaces the filtering function of the kidneys, is one of just two options when kidney disease is advanced (the other being a kidney transplant) and requires three visits each week to a dialysis center.

Nationwide, the dialysis patient population is growing at a 10% rate annually.<sup>13</sup> And increasing numbers of Americans are developing kidney disease: the Centers for Disease Control estimate that more than 10% of adults age 20 and above, or more than 20 million Americans, have chronic kidney disease. The increase in the incidence of diabetes and high blood pressure, which is linked to rising obesity rates, accounts for much of the rise of kidney disease. The risk of kidney disease also increases with age, since risk factors for the disease become more common with age.<sup>14</sup>

Transit agencies have to meet the increasing demand for dialysis transportation, given the mandate to serve all eligible trips. In the Bay Area, ECCTA, Marin Transit, San Francisco MTA, and SamTrans all reported increasing numbers of dialysis trips. ECCTA, the smallest operator in the group, noted five operational dialysis centers within its service area, four of them running four treatment shifts between 5:00 AM and 10:00 PM, with a sixth center to be operational by mid-

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<sup>13</sup> "An Analysis of Transportation Needs for Dialysis Patients in Fairfax County, VA," prepared by George Mason University School of Public Policy, May 2004.

<sup>14</sup> "National Chronic Kidney Disease Fact Sheet 2010," Centers for Disease Control and Prevention, accessed at <http://www.cdc.gov/diabetes/pubs/factsheets/kidney.htm> and CDC Press Release, 1-26-2011. "Number of Americans with Diabetes Rises to Nearly 26 Million," accessed at [http://www.cdc.gov/media/releases/2011/p0126\\_diabetes.html](http://www.cdc.gov/media/releases/2011/p0126_diabetes.html)



summer. ECCTA noted that the majority of dialysis clients travel out of their home town to receive treatment, passing two or three centers at times to get to their assigned treatment center. In Santa Clara County, Outreach is working with health and human service providers to help these agencies provide dialysis trips.

Similar trends are occurring elsewhere in the country. For example, the ADA paratransit provider in the Baltimore, MD region estimates that 18% or more of its trips are for dialysis. The transit authority in Dayton, OH has raised concerns about the increasing demand for dialysis transportation and particular concerns when the riders require extra assistance, beyond what the drivers are trained to do, when the riders are weak from the dialysis treatment.<sup>15</sup> This extra assistance increases the time required for dialysis trips, which in turn decreases the paratransit system's productivity. Decreased productivity increases ADA paratransit system costs, as additional resources are needed to serve the demand.

## Improvements to ADA Paratransit Service Quality

In the early 2000s many paratransit systems began enforcing a zero denials policy, which resulted in increasing demand in the early years of the decade. In some other areas, transit systems have made much greater changes to their paratransit systems in response to legal settlements or negative compliance reviews by the Federal Transit Administration. In addition to eliminating denials, some agencies have focused on on-time performance and higher levels of rider assistance. Such improvements may be needed to ensure that the transit agency is in compliance with the ADA, but the improved quality can impact demand.

Data from an East Coast transit agency analyzed by the consulting team showed a direct correlation between improved on-time performance and ridership demand: monthly data showed that ridership increased 16% over a 12-month period with on-time performance improving from 80% to 91% over the same time period. Interview information from human service agency staff in another East Coast city indicated that the agency's propensity to shift trips to the region's ADA paratransit service corresponds to time periods when service quality is high.

Of significance for ADA paratransit costs, high levels of on-time performance, particularly in large, complicated urban regions, can have a negative impact on productivity, so that fewer passenger trips can be carried in the same amount of time. This will increase the cost per passenger trip and require greater resources to serve the same amount of demand. Eliminating denials can also reduce productivity, since the trips that had been denied were typically ones that did not fit well into vehicle schedules.

A recent trend related to service quality is the move by FTA to require all transit agencies to provide door-to-door service as needed. Anecdotal evidence suggests that providing door-to-door service in some communities has increased dwell times, not because of the time needed for drivers to go to the door at passenger pick-up locations, but because riders wait until the driver knocks on the door to get ready for their trip. Increased dwell times will also have a negative impact on productivity. Efforts to ensure that riders are ready at the start of their scheduled on-time pick-up window will help work towards cost-effective service.

## Fixed-Route Service Changes

Fixed-route service changes can affect paratransit demand in several ways:

- If routes are added or extended, or hours of service are increased, then the required ADA paratransit service area or hours may also increase, producing added demand.

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<sup>15</sup> "Agencies seeking solution to dialysis transport demands," *Dayton Daily News*, June 14, 2009, accessed at [www.daytondailynews.com/news.com/agencies-seeking-solutions](http://www.daytondailynews.com/news.com/agencies-seeking-solutions)

- Correspondingly, service reductions that shrink the overall service footprint or span of service reduce the required ADA paratransit service area or hours.
- Service reductions that do not shrink the overall service footprint or span of service may actually increase ADA paratransit demand. For example reducing service frequency or express service has no impact on the required ADA service area or span of service but could result in ADA paratransit riders with conditional eligibility relying more on paratransit. Recent cuts triggered by tight budgets may have produced this type of demand increase, but no quantitative evidence is available.

## **Factors Affecting Vehicle Operating Cost**

Factors that could affect vehicle operating costs include:

- Wages and benefits of drivers and other operating staff
- Fuel costs
- Insurance rates
- Vehicle size
- Competitive conditions affecting contractor bidding

Several operators have described steps that they are taking to control vehicle operating costs. These are discussed in the next section.

At most Bay Area operators, vehicle operating costs are mainly contained in contractor costs. These include not only the cost of actually driving and maintaining vehicles, but also costs for staffing a call center, dispatching vehicles, and providing administrative support for these activities. In hopes of explaining trends in contract costs, the operators were asked to divide contract costs into wages, benefits, overhead, fee or profit, and other costs based on available documentation from providers. However, the analysis was limited by inconsistencies in the available data (in some cases due to differences in methods of operating and contracting, and in other cases due to limitations of data provided by contractors). Despite these limitations, it is clear that wages and benefits are the largest component of contract costs, accounting for 63% of reported costs among the large operators and 72% among the smaller operators.

Where taxis provide a large portion of service, as in San Francisco and Santa Clara County, wages do not include the earnings of taxi drivers. (San Francisco, which makes the most use of taxicabs, did not provide contract cost detail. VTA's contracted broker, Outreach also makes extensive use of taxis and did provide contract costs.)

On the topic of taxi rates, San Francisco MTA staff noted that taxi meter rate increases impact paratransit taxi costs; in San Francisco, the paratransit taxi patron pays the meter rate with a fare instrument (formerly scrip and now a debit card) which is subsidized by the SFMTA, so meter rate increases directly affect paratransit costs. Meter rates are not raised on a regular basis, but when they increase it can be a significant cost to the paratransit program.

East Bay Paratransit noted ways that contracting arrangements combine with other factors to increase costs. First, there has been an overall annual increase in contracted costs due to built-in increases in wages and expenses in multi-year broker and service provider contracts. Second, fluctuating fuel costs have had a significant effect, especially since 2008 when the consortium changed from a model where fuel was built into the provider hourly rates to one where actual fuel costs were billed separately, causing a more direct impact from rising fuel costs. ECCTA and Sonoma County Transit also noted an impact from rising fuel costs, and for Sonoma from insurance rates as well.

Most paratransit drivers for the operators in the survey are represented by unions. The only exceptions are taxi drivers and those that work for the non-profit providers in Marin and Sonoma, and some smaller providers in San Francisco, most of them non-profits.

## **Factors Affecting Productivity**

Productivity (measured as passengers per revenue vehicle hour) has general steady and even improving at some operators, but there are nevertheless pressures which make it difficult to maintain productivity levels and which could put pressure on productivity in the future. Some of these have already been mentioned and others were noted by the operators in their survey responses.

**Time to secure mobility aids.** ECCTA, Marin Transit, and SamTrans all noted issues related to mobility aids. ECCTA reported an increase in riders using various mobility aids that are not really designed to be secured within a vehicle. These take additional time to secure safely before proceeding on with the ride. ECCTA staff believe that this trend accounts for a lot of lost travel time. At SamTrans, trips by non-ambulatory customers increased from 41% of trips in 2005 to 44% in 2010. During the same period, trips by customers who use large wheelchairs and scooters increased from 8% of trips to 13% of trips (an increase of 63%). On Marin Transit's paratransit service, wheelchair trips have increased by approximately 3% to 5% per year.

**Longer trips.** SamTrans reported that the weighted average for trip lengths increased by 14% in the last five years. ECCTA described a trend toward increasing trip time--many riders are taking more trips that are improving their quality of life (clubs, education, gyms, etc). Given existing fare structures, longer rides are affordable. Marin Transit also noted longer trip lengths.

**Operating speed.** Slower operating speeds due to traffic congestion could also increase costs. Based on the available data provided by the operators, there is no obvious trend toward slower operating speeds, at least as measured by dividing revenue vehicle miles by revenue vehicle hours, which should approximate average speed, including dwell time for loading and unloading passengers. However, if operators have been able to make changes to reduce dwell times and unproductive slack time, then it is possible that that could mask slower speed of operation between stops.



## **Chapter 4. Strategies for Sustainable ADA Paratransit**

Transit agencies have looked to a range of strategies to operate their ADA paratransit services as efficiently as possible while maintaining a high level of service to customers. These strategies can be grouped by categories similar to those used to describe factors driving cost increases, including demand management, productivity measures, and cost containment measures. This section provides a brief overview of these strategies, most of which are being used by some Bay Area transit operators. Further analysis of the effectiveness of these strategies is provided in the next chapter.

### **Demand Management**

**Enhanced ADA Paratransit Certification Process.** A robust and sophisticated certification process which may include in-person interviews as well as evaluations of applicants' functional mobility by trained professionals provides more accurate determinations of applicants' travel skills than simpler processes such as those based simply on paper applications with no direct contact with the applicant. More sophisticated models that incorporate an in-person assessment lead to more applicants referred to fixed-route transit instead of ADA paratransit, based on their individual functional abilities. This slows growth of enrollment of ADA eligible persons and eliminates the costs of the ADA paratransit trips that they may have taken if certified as ADA eligible. While there are clearly economic benefits to shifting paratransit riders to fixed-route service, this trend can also result in improving the mobility of riders due to the increased spontaneity afforded by fixed-route transit.

**Implementing Conditional Eligibility.** Conditional eligibility finds that some applicants can use fixed-route service for at least some of their trips and specifies the particular conditions that prevent use of fixed-route service. This requires a more sophisticated eligibility certification process than use of paper applications with no personal contact. Implementing these conditions on a trip-by-trip basis (sometimes called "trip-by-trip eligibility") requires a detailed and on-the-street analysis of applicants' trip patterns and paths of travel for transit use. For trip-by-trip eligibility determinations, provision of travel training can help transition riders to fixed-route use for specific trips. Use of conditional and trip-by-trip eligibility avoids ADA paratransit costs for those trips that ADA-eligible riders take on fixed-route service.

**Travel Training.** Transit agencies are investing in programs that teach persons with disabilities and others how to use fixed-route transit. These programs include both mobility orientation sessions, which are one-time sessions where transit service is introduced and transit skills taught, and one-on-one individualized training. This latter training may last from one day to several days, and up to several weeks or even longer. The one-on-one training is personalized for the individual trainee, helping the individual learn how to take specific trips on transit. An individual who has successfully completed travel training and uses fixed-route transit can travel more spontaneously and at less cost than on ADA paratransit (since fixed-route fares are typically less than ADA paratransit fares).

The transit agency realizes cost savings for the paratransit trips that are not taken due to travel training. In addition the individuals gain greater mobility by learning to use transit, which does not require advance reservations and has a much lower fare than ADA paratransit. A related concept is the use of mobility ambassadors to encourage seniors to learn to use fixed-route bus service before they apply for ADA paratransit.

**Paratransit Feeder to Fixed-Route Service.** A few transit agencies identify paratransit riders whose eligibility is based solely on inability to get to and from transit stops and offer them only a

ride to and/or from the transit stop, at least for some of their trips. This may reduce the cost of providing those trips and also reduce demand for ADA paratransit service. Since the possibility of offering feeder service needs to be determined for each trip, in practice implementing feeder service is combined with implementing conditional eligibility.

**Fare Incentives to Use Fixed-Route Service.** Many transit agencies provide fare incentives to their ADA-eligible riders and often a companion as well, typically allowing free use of fixed-route transit service. To the extent that those individuals would have used the ADA paratransit service instead, the transit agency saves the cost of the ADA paratransit trip. TCRP research from 1997 found shifts from paratransit to fixed-route service of up 23% of total paratransit demand as a result of fare incentives.<sup>16</sup> However, some transit agencies in large urban areas have found that this type of incentive may increase demand for ADA eligibility, with individuals interested in free use of fixed-route service and not solely ADA paratransit certification. In this case, there is also lost revenue from fixed-route fares to consider. In such cases, the transit agency may provide the free fixed-route fare incentive only to those ADA eligible riders who have conditional eligibility, confirming that those individuals are able to use fixed-route service for some of their trips. Combining fare incentives with a rigorous eligibility process reduces the risk of unintended consequences from the fare incentives.

**Premium Charges for Service Beyond ADA Requirements.** Where transit agencies provide paratransit service that goes beyond what the ADA requires, they may charge extra for those "premium" services. These fares not only manage demand, they also raise revenue. Transit agencies that serve an entire jurisdiction (for example they may serve an entire city or taxing district instead of just  $\frac{3}{4}$  mile on both sides of fixed-routes) can define a "two-tiered" service area, with the first tier being the ADA required area and the second tier extending to the jurisdictional limits. A higher fare can then be charged for trips in that second tier. The transit agency can also adopt differing policies for that premium second tier, such as more limited service hours, denials of service once capacity is reached, and so forth. Other types of premium fares can apply to same-day trip requests and open returns. The premium charges will increase revenue for the transit agency, and, perhaps more significantly, they help establish the line between what is required by the ADA law and what is not (i.e., services or practices that could be eliminated, if such action is needed for financial reasons).

**Partner with Community Agencies to Supplement ADA Service.** Transit agencies can partner with existing community agencies to support those community agencies in transporting individuals with disabilities, usually clients of the agencies' own programs. The partnerships can take different forms such as providing vehicles to the community providers as well as offering maintenance services, fuel and driver training. Or the partnership may involve a direct contract arrangement where the transit agency provides operating funds to the community provider to support a specified level of service or for a defined number of trips. The individuals transported by these community agencies may not all be formally ADA paratransit eligible, but typically would be if they applied. Since the per-passenger trip costs for the community providers are generally significantly less than that of the ADA paratransit service, the transit agency saves the difference between its full costs to operate ADA paratransit trips and its support to the community providers for their trips.

**Align Service to ADA Requirements.** Transit agencies that have provided ADA paratransit service beyond what the ADA requires are increasingly re-aligning the service to the ADA requirements. This includes, as appropriate, providing service only within  $\frac{3}{4}$  mile of fixed-route service and only during the hours of fixed-route service. This may also mean restructuring fares so that ADA paratransit fares are twice the comparable fixed-route fares. Realignment will save

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<sup>16</sup> "Evaluating Transit Operations for People with Disabilities," by Multisystems, Inc. and Crain & Associates, Inc. Transit Cooperative Research Program, April 1997,

the operating costs for that paratransit service that went beyond the requirements. If ADA paratransit fares are raised to allowed levels, demand will fall and fare revenues will increase. Cost savings will depend on the extent of paratransit service that went beyond the requirements. Experience in some communities has found that a relatively small percent of trips go beyond the ADA required service area and some transit agencies will grandfather riders that traveled outside the ADA service area once it is realigned to the required corridors, allowing them to continue making their now-beyond the service area trips. Such provisions will impact potential cost savings.

**Taxi Subsidies.** Some transit operators have user-side subsidy taxi programs that operate as an adjunct to ADA paratransit. These programs provide discounts for participants to use taxicabs. These programs may reduce the overall cost of providing ADA paratransit by providing a very attractive alternative for customers, one that provides an exclusive ride and does not require an advance reservation, but which is less expensive to provide than ADA paratransit. Increasing the availability of wheelchair accessible taxicabs would enhance the effectiveness of taxi subsidies. Taxi subsidies may be especially effective in combination with technology such as debit cards in place of scrip or vouchers. Debit cards allow for extensive monitoring of taxi trips and additional enforcement of program rules, much reducing improper use of the program. By reducing possibilities for abuse of the supplemental program, debit cards may make a taxi subsidy an effective means of managing the cost of the ADA paratransit program. If participation in the taxi subsidy is limited to a small number of taxi companies, other transit operators have found less technological means of control and monitoring usage, such as taking reservations centrally or relying on taxi dispatchers to ration and monitor usage.

## **Productivity Measures**

**Controlling no-shows and late cancellations.** An effective no-show/late cancellation policy can reduce the waste of paratransit resources that results from vehicles that are dispatched for riders who do not take the trip they had booked. Adoption and enforcement of an effective no-show/late cancel policy, with penalties for riders who excessively no-show and cancel trips late, can reduce the amount of service that is wasted when riders fail to show up or cancel at the last minute. If that unused capacity can then be used to provide passenger trips, the strategy will improve productivity.

**Changes to Operating Policies.** Some operators have adjusted policies such as the on-time window for passenger pick-ups and the number of days in advance that reservations are accepted. A longer on-time window can make it possible to create more productive schedules. A shorter advance reservations period may reduce the incidence of cancellations and no-shows.

**Paratransit Technology.** Almost all ADA paratransit systems now use computer-assisted scheduling/dispatch systems. In many cases there were modest gains in productivity when these systems were introduced. More current trends are use of Automatic Vehicle Locators (AVL), Mobile Data Terminals (MDTs), and Interactive Voice Response (IVR).

AVL and MDTs can improve productivity by allowing dispatchers to better manage trips in real-time and by providing detailed operational data that can then be used to schedule more efficient service. The ability to track operations in real-time improves dispatchers' ability to modify schedules in response to actual conditions on the day of travel and to make the most productive possible changes in response to delays, no-shows, vehicle breakdowns, and other events that cannot be predicted. MDTs and AVL also permit collecting better information on what is known as "slack time" in the drivers' schedules. With detailed data on slack time, paratransit managers can then improve and tighten schedules, leading to increased productivity. AVL is also useful in enforcing a no-show policy by allowing determination of whether the vehicle was actually at the pick-up location, and arrived within the promised on-time window.

IVR can be used to allow riders to check on their scheduled rides and cancel rides without taking up staff time and at times when there are no call takers on duty. IVR can also make automated reminder calls to riders and calls that alert riders when their vehicle is on the way. In principle, these features have the potential to reduce no-shows and increase passenger readiness for pick-ups.

**Manage Supply of Revenue Hours to Match Demand.** A better match between ridership patterns and revenue hours deployed can reduce ADA paratransit operating costs. This requires that the transit agency understand its ridership patterns by day of week, by month and by season. Once patterns are understood, the transit agency can develop vehicle schedules that more closely match expected ridership. Depending on labor agreements, daily adjustments to vehicle schedules can be used to further fine-tune the supply of vehicle hours to match demand. This strategy will reduce operating costs to the extent that unproductive time is eliminated. This is true directly when a transit agency pays its contractor by the vehicle hour. However, even when payment is per trip, steps to reduce vehicle hours could be a basis for negotiation of the rate per trip.

Some paratransit managers believe that paying contractors per trip instead of per hour is a useful way to encourage contract providers to create efficient schedules and manage drivers for productivity.

**Effective Use of Taxis and Other Non-Dedicated Vehicles.** An earlier section described offering discounted taxi rides as a demand management tool. Taxis can also be used directly as an integrated component of ADA paratransit operations. The paratransit provider or broker determines that specific trips should be assigned to a taxi provider; this decision is made by the provider or broker for efficiency reasons, not by the rider for reasons of convenience.

Effective use of taxis to provide ADA paratransit service can reduce costs. For example, taxis can be used as overflow providers, serving trips during peak periods that cannot be scheduled on the dedicated vehicles. This will help eliminate the need for the transit agency to acquire additional dedicated vehicles that may only be needed during specific peak periods and save capital expenses. Even more, it can save the need to schedule additional driver runs that may only be needed for a few hours out of the day. Taxis can also be used to provide “dedicated service” (that is a taxi vehicle performs a sequence of ADA paratransit trips, not mixed with regular taxi business), particularly during specific time periods, such as late night hours or weekend hours when demand is lower. Use of taxis for dedicated service will reduce operating costs for the transit agency given the lower cost structure of taxis compared to traditional transportation contractors. Some transit agencies also use private lift-van companies, such as those that provide Medicaid non-emergency transportation, in a similar fashion as taxicabs.

**Vehicle sharing.** As part of a mobility management strategy, some operators are experimenting with mutual sharing of capacity with human service transportation providers. This strategy holds the promise of making productive use of vehicles, reducing operating cost by using less expensive providers, and reducing trip shifting from human service providers.

**Vehicle mix.** Large vehicles are not only more expensive to operate than smaller ones, they may be slower, both in traffic and in boarding and unloading passengers. However, too many small vehicles, or vehicles of the wrong design, could limit the ability to group trips. Insufficient wheelchair accessible vehicles will also limit productivity and could result in unacceptable problems in serving passengers who use wheelchairs. Achieving the right vehicle mix requires finding an optimal balance among grouping trips, availability of accessible vehicles, and speed of operation. Some operators are experimenting with hybrid and alternative fuel vehicles. Assuming that capital funds are available for these vehicles, the reduced cost of fuel can save considerably on operating cost.



**Alternative and Hybrid Services.** In some areas it is more cost effective to serve all of the public, including people with disabilities, with a single service rather than with separate fixed-route and ADA paratransit services. Depending on the area, general public dial-a-ride or route deviation (also known as flex-route) services may be appropriate.

## **Cost Containment Strategies**

Aside from managing demand and improving productivity, some operators have taken steps directly aimed at cost reduction.

**Use of Volunteer Drivers in ADA Paratransit.** Volunteers are clearly less expensive than paid employees for driving ADA paratransit vehicles or performing office tasks, although there are expenses for recruitment, training, drug testing, etc. Assuming that service quality is not jeopardized, using volunteers may be particularly effective during peak periods when a short volunteer driver shift can avoid deploying a longer dedicated driver shift.

**Capitalizing Facilities and Vehicles.** If capital funds can be used to purchase vehicles or an operating facility instead of having contract providers provide these, then the operating cost of paratransit service will be reduced.

**Internal Cost Cutting.** At least one Bay Area operator reports use of staff reductions, reduced work hours, wage freezes, and reductions in business expenses. The same operator also reports success negotiating cost containment strategies with contract providers.

## **Restructuring Service**

**Separating a Control Center from Vehicle Operations.** Some operators have been able to improve productivity by having one entity perform scheduling and dispatching (a “control center”), while other entities, often including taxicabs, operate vehicles. The control center can make an optimal assignment of trips to operating entities, including taxis and other non-dedicated vehicles, and optimize the scheduling of vehicles and drivers without conflicting incentives that can exist when a single provider is responsible for all functions. A control center is particularly effective combined with use of automated dispatching tools (AVL and MDTs).

**Consolidate Administration or Operations.** If a single entity provides or oversees all paratransit service in an area served by multiple fixed-route transit systems, there may be economies of scale or elimination of unnecessary duplication of functions. It can also allow for added expertise and different service structures, such as have a control center separate from vehicle operations.

## **Alternatives to ADA Paratransit**

In recent years MTC has sponsored a variety of plans that have generated recommendations which may be relevant to sustainability of paratransit services, principally by creating alternatives to ADA paratransit that reduce the demand for expensive mandated service. A number of local planning efforts have produced similar recommendations. Twenty-eight MTC-sponsored community based transportation plans, the MTC regional coordination plan, and four local plans were reviewed:

- Community Based Transportation Plans:
  - Alameda
  - Central and East Oakland
  - South and West Berkeley

- Central Alameda County
- West Oakland
- Downtown Martinez
- Bay Point
- Richmond Area
- Monument Corridor
- Canal Neighborhood, San Rafael
- Marin City
- Napa
- Bayview Hunters Point
- Mission-Geneva
- Tenderloin-Little Saigon
- Bayshore
- East Palo Alto
- North Central San Mateo
- Milpitas
- East San Jose
- Gilroy
- Vallejo
- Cordelia/Fairfield/Suisun
- Dixon
- The Springs (Central Sonoma Valley)
- Roseland
- Lower Russian River
- Healdsburg
- Alameda County (ACTIA) Service Delivery Analysis (2010)
- Marin County Senior Mobility Action and Implementation Plan
- MTC Coordinated Public Transit Human Services Transportation Plan Elderly and Disabled Component
- San Mateo County Senior Mobility Action Plan

The review identified 25 recommendations, many of them contained in multiple plans, of possible relevance to this project. They are listed in Figure 20. Eight strategies based on these recommendations have been identified as particularly relevant for this plan: enhancements to fixed-route service, volunteer driver programs, mobility management, targeted transit promotion to seniors, shuttles and community buses, walkable communities, land use planning with the needs of seniors and persons with disabilities in mind, and coordination with human service transportation. These strategies are the ones that have the greatest promise to reduce demand for ADA paratransit by creating or preserving alternatives. They are described following Figure 20.

**Figure 20. Recommendations from Prior Plans**

Recommendation	Description	Plans where recommended
Accessible Taxi Cabs	Incentives or assistance for wheelchair-accessible taxicabs.	<ul style="list-style-type: none"> <li>• MTC Coordinated Plan</li> <li>• San Mateo County Senior Plan</li> </ul>
Centralized Taxi Coordinator	County Taxi Coordinator and county-wide centralized phone number for same day taxi service.	<ul style="list-style-type: none"> <li>• ACTIA Service Delivery Analysis 2010</li> </ul>
County-wide Taxi Ordinance	An ordinance requiring taxi companies to provide senior discounts; centralized management of taxi contracts; uniform regulations to promote better service quality	<ul style="list-style-type: none"> <li>• CBTPs: South and West Berkeley, Dixon, Cordelia/Fairfield/Suisun Project Area</li> <li>• San Mateo County Senior Plan</li> </ul>
Subsidized Taxi Program	Subsidized taxi service through taxi fare vouchers, scrip, tickets, or swipe cards	<ul style="list-style-type: none"> <li>• CBTPs: Downtown Martinez, Monument Corridor, East San Jose, Gilroy, Dixon, Healdsburg, Marin City</li> <li>• Marin County Senior Plan</li> <li>• San Mateo County Senior Plan</li> </ul>
Senior Walking Groups	Coordinated walking groups for seniors	<ul style="list-style-type: none"> <li>• Marin County Senior Plan</li> </ul>
Casual Carpool/Ridesharing	Casual carpool from senior facilities; ride-sharing for seniors	<ul style="list-style-type: none"> <li>• Marin County Senior Plan</li> </ul>
Travel Buddy/Escort Program	Escorted travel on paratransit and senior "buddy" programs: e.g. Escort "Buddy" Programs where experienced transit riders accompany and support new riders; transfer assistance to help with multi-operator paratransit trips and transfers between paratransit and fixed-route service; "transit buddy" program where seniors team up and travel together	<ul style="list-style-type: none"> <li>• MTC Coordinated Plan</li> <li>• CBTP: Vallejo, Monument Corridor</li> </ul>

**Figure 20. Recommendations from Prior Plans**

Recommendation	Description	Plans where recommended
Volunteer Driver Program	Volunteer driver programs managed by community organizations, a “community transportation manager” or at a county-wide level to oversee recruitment and training of drivers, provide supplemental insurance, conduct background checks and other reviews of driver records, and in general provide overall coordination of the program. May use volunteers' vehicles or vehicles provided by the program. May include some paid drivers.	<ul style="list-style-type: none"> <li>• MTC Coordinated Plan</li> <li>• CBTPs: East San Jose, Gilroy, Healdsburg, Lower Russian River, Milpitas, Marin City,</li> <li>• ACTIA Service Delivery Analysis 2010</li> <li>• Marin County Senior Plan</li> <li>• San Mateo County Senior Plan</li> </ul>
Interagency cooperation to share best practices and procurement	Coordinated vehicle purchasing at County level (to ensure better prices and consistency of vehicle quality- could make available to cities and non-profit organizations); Pool all vehicles as resources; coordinated ticket/voucher/scrip printing and dissemination; unified countywide contracting for group trips; Better information sharing.	<ul style="list-style-type: none"> <li>• MTC Coordinated Plan</li> <li>• Marin County Senior Plan</li> <li>• ACTIA Service Delivery Analysis 2010</li> </ul>
Mobility Management Center	Centralized (Countywide) Mobility Management Center: could provide information and referral, website, literature distribution, technical assistance/training for agency staff and travel training for users; could also provide call center with trip planning and scheduling; could include a rider information database (similar to the Regional Eligibility Database for ADA programs) that supports inter-jurisdictional or inter-agency travel. Alternative: sub-county "mini-mobility managers" or centers.	<ul style="list-style-type: none"> <li>• MTC Coordinated Plan</li> <li>• CBTPs: East San Jose, Dixon, Milpitas</li> <li>• ACTIA Service Delivery Analysis 2010</li> <li>• Marin County Senior Plan</li> </ul>

**Figure 20. Recommendations from Prior Plans**

Recommendation	Description	Plans where recommended
Additional Funding Sources	Facilitating potential new revenue sources, such as cost sharing with the Veteran's Administration or exploring the potential for integration of Medi-Cal funding (as has been accomplished in San Diego County).	• ACTIA Service Delivery Analysis 2010
Group Trips	Shuttle-based, pre-scheduled group trips to common destinations.	• CBTP: Central and East Oakland • Marin County Senior Plan
Accessible transit signage	Better signage for accessible services	• ACTIA Service Delivery Analysis 2010
Accessible transit information (possibly through enhanced 511).	Enhanced regional information (using 511 or other means) about public transportation for paratransit users, people with disabilities, and seniors; comprehensive senior/disabled mobility guide; seminar hosting for agency staff that work with older people.	• MTC Coordinated Plan • ACTIA Service Delivery Analysis 2010 • San Mateo County Senior Plan
Older Driver Safety and Mobility Workshops	Older Driver Safety and Mobility Workshops to extend safe driving (and reduce the need for paratransit) through improved nutrition, exercise, and modifications to vehicles, and enabling older drivers to determine when it is time to explore non-auto alternatives. Assistance to people who have just lost their licenses. Could be a partnership with the DMV, CHP, AARP. DriveWell program (based on the American Society on Aging model).	• MTC Coordinated Plan • CBTPs: Monument Corridor, Richmond Area, • ACTIA Service Delivery Analysis 2010 • Marin County Senior Plan • San Mateo County Senior Plan
Transit driver training on accessibility	Additional transit driver training on accessibility and features, e.g. increase awareness of wheelchair securement issues	• MTC Coordinated Plan

**Figure 20. Recommendations from Prior Plans**

Recommendation	Description	Plans where recommended
Targeted transit promotion to seniors	Targeted marketing to encourage seniors and people with disabilities to ride transit; e.g. “Try Transit” brochure and promotions, video, tailored service descriptions. Mobility Ambassadors to provide training and arrange group trips and other events.	<ul style="list-style-type: none"> <li>• Marin County Senior Plan</li> <li>• San Mateo County Senior Plan</li> </ul>
Travel Training	Travel training, including orientation and mobility training and training for individuals and groups; transit safety education; organized trips. Could take form of regionally based travel trainers under contract to central agency.	<ul style="list-style-type: none"> <li>• MTC Coordinated Plan</li> <li>• CBTPs: Downtown Martinez, Monument Corridor, Alameda,</li> <li>• ACTIA Service Delivery Analysis 2010</li> <li>• Marin County Senior Plan</li> <li>• San Mateo County Senior Plan</li> </ul>
Medical Transportation (non-emergency)	Non-emergency medical transportation for Medi-Cal patients; shuttle service to key medical offices and health service providers; require private health providers to transport clients; Hospital Discharge Transportation Service	<ul style="list-style-type: none"> <li>• MTC Coordinated Plan</li> <li>• CBTPs: West Oakland, East San Jose, Bayshore, Milpitas, Marin City, Bayshore</li> <li>• Marin County Senior Plan</li> </ul>
Shuttles	Senior-friendly shuttles, “community buses”, or circulators: local fixed-route shuttles to serve short trips within communities; open to all with emphasis on seniors. Could also be fixed-route services that will deviate on request for seniors/people with disabilities; e.g. shopper shuttle on weekends.	<ul style="list-style-type: none"> <li>• MTC Coordinated Plan</li> <li>• CBTP: West Oakland</li> <li>• Alameda Community-Based Transportation Plan</li> <li>• Marin County Senior Plan</li> <li>• San Mateo County Senior Plan</li> </ul>
Guaranteed/Emergency Ride Home for Seniors	Emergency Ride Home for when other transportation options fall through.	<ul style="list-style-type: none"> <li>• MTC Coordinated Plan</li> <li>• CBTPs: Richmond Area, Milpitas, East San Jose, Bay Point</li> </ul>
Expand Existing City-based and faith-based programs	Expand existing city-based programs such as Berkeley local paratransit services, Read-Ride in Dixon; Faith in Action.	<ul style="list-style-type: none"> <li>• CBTPs: South and West Berkeley, Dixon, Cordelia/Fairfield/Suisun Project Area</li> </ul>

**Figure 20. Recommendations from Prior Plans**

Recommendation	Description	Plans where recommended
Walkable Communities	Identify priority improvements in neighborhoods with high concentrations of seniors and walkable destinations (participatory process to ID priority improvements); utilize ADA transition plans as foundational project lists	<ul style="list-style-type: none"> <li>• Marin County Senior Plan</li> <li>• San Mateo County Senior Plan</li> </ul>
Land Use Planning with Senior/Disabled Needs in mind	Planning reviews for senior housing and other senior-related facilities should require close-in locations and a transportation element.	<ul style="list-style-type: none"> <li>• Marin County Senior Plan</li> </ul>
Dial-a-Ride Service	General public demand-response service (similar to existing Novato service)	<ul style="list-style-type: none"> <li>• Marin County Senior Plan</li> <li>• Cordelia/Fairfield/Suisun CBTP</li> </ul>

**Enhancements to Fixed-Route Service.** Making fixed-route services as welcoming as possible to riders with disabilities can make other strategies more effective, especially implementing conditional eligibility, travel training, paratransit feeder to fixed-route service, and fixed-route fare incentives. This strategy incorporates multiple recommendations from the plans, including accessible transit signage, accessible transit information, and transit driver training on accessibility.

**Volunteer Driver Programs.** Volunteers provide door-to-door and often door-through-door service, usually as a single ride as opposed to a shared ride, typically for seniors who are frail and no longer drive. The individuals receiving service would usually but not always be eligible for ADA paratransit service. Some of them need assistance beyond what ADA paratransit provides, such as assistance in getting into the doctor's office once arriving at a medical building. In some cases, volunteers provide only a portion of the rides, while paid drivers provide others. A volunteer driver program is a non-ADA program, typically not operated by a transit agency. It is unrelated to the strategy of having volunteers drive ADA paratransit vehicles that was discussed earlier.

Volunteer driver programs are usually managed by community organizations, a "community transportation manager" or at a county-wide level to oversee recruitment and training of drivers, provide supplemental insurance, conduct background checks and other reviews of driver records, and in general provide overall coordination of the program. The volunteer drivers may use their own vehicles or vehicles provided by the program. Some volunteer driver programs supplement service with paid drivers.

These volunteer programs offer a low-cost transportation option for seniors who are usually frail and no longer drive and would typically be eligible for ADA paratransit service, avoiding the costs to serve them on ADA paratransit. In some cases, seniors who are very frail need assistance beyond what ADA paratransit provides, such as assistance in getting into the doctor's office once arriving at a medical building: a volunteer driver can take the senior into the doctor's office and even wait with the senior until the appointment time whereas an ADA paratransit driver would take the senior to the door of the building. The ability to provide *chained trips* is also important for seniors in many cases, for example, a stop at the pharmacy on the way home from a trip to the doctor, a service that ADA paratransit does not provide.<sup>17</sup>

**Mobility Management.** In the context of specialized transportation, mobility management involves facilitating transportation improvements for seniors, persons with disabilities and individuals with lower incomes and connecting people with appropriate services that work for them through a single point of contact. Interest in mobility management has grown since it has been promoted by the United We Ride initiative of FTA and other federal agencies, and since mobility management activities were identified as eligible to be considered as capital expenses with 80% Federal funding under the New Freedom and Job Access / Reverse Commute programs. Among various services and programs, mobility management can include:

- "one-stop" information centers that coordinate information on all transportation options,
- call-centers with trip planning and scheduling,
- travel training,
- transportation brokerages that coordinate providers, funding agencies, and persons needing trips, and

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<sup>17</sup> A 2004 GAO report, *Transportation Disadvantaged Seniors – Efforts to Enhance Senior Mobility Could Benefit from Additional Guidance and Information*, Report to the Chairman, Special Committee on Aging, US Senate, found that chained trips as well as trips where packages must be carried are among the important unmet trip needs for seniors who cannot drive themselves.



- planning and implementation of coordinated services.

**Targeted Transit Promotion to Seniors.** Targeted marketing to encourage seniors to use fixed-route transit service may include promotions based on a limited period (a week or a month) when transit is free for seniors, distributing targeted marketing materials through senior housing and senior centers, and helping older people learn to use transit by providing training or group trips. To the extent that older adults can be encouraged to try transit and then use it before they can no longer drive and look for alternatives, they will become more comfortable with transit and may use it as a reasonable option for local trip-making, potentially delaying the time when they apply for ADA paratransit. Importantly, use of transit will also give the seniors more independence and mobility, boosting transit ridership as well as increasing the constituency for transit.

Increased use of fixed-route transit by seniors will be facilitated if the transit agency also makes transit more senior-friendly, including, for example, providing fare incentives, senior sensitivity training for bus drivers, and transit services better tailored for seniors such as flexible shopper routes and neighborhood circulators (these are discussed below under shuttles and community buses). Thus, marketing transit to seniors can contribute to efforts that aim to slow the growth in demand and cost for ADA paratransit.

**Shuttles and Community Buses.** Senior-friendly shuttles, “community buses,” or circulators are generally designed to serve short trips within communities or neighborhoods with an emphasis on seniors and destinations they frequent. They connect senior housing and areas with concentrations of seniors with local shopping, medical offices and other destinations, typically operating on smaller streets and with smaller vehicles. These services may also include fixed-route services that deviate on request for seniors and people with disabilities. In some cases, shopper routes are operated as an adjunct to the ADA paratransit program.

There are numerous examples around the country of these flexible, senior-oriented services, operated by transit agencies as well as local jurisdictions, sometimes with funding support from private organizations such as grocery store chains. The ability of these services to substitute for ADA paratransit in meeting the trip demand of seniors and others with specialized needs for frequent local trips results in avoided costs from the transit agency’s more costly ADA paratransit trips.

**Walkable Communities.** The term “walkable communities” refers to communities that are pedestrian friendly, with sidewalks and pathways connecting residential areas with activity centers. Walkable communities encourage walking with mixed land uses, so that retail and shopping areas are close by or interspersed with residential areas, making walking trips for shopping and other purposes feasible.

The concept of walkable communities is closely related to concepts such as smart streets, context-sensitive design, livable communities, and neo-traditional town planning. All of these refer to efforts to design and develop higher density, mixed use community environments that facilitate trips by foot, bike, and transit. In particular, efforts to increase density and improve pedestrian facilities make fixed-route transit more effective and attractive: higher densities allow transit to be more productive as every bus trip begins and ends with a pedestrian trip. And to the extent that pedestrian enhancements are fully accessible, with curb cuts and sidewalks without obstructions from utility poles or vendor boxes, people with disabilities benefit, especially those using wheelchairs and scooters.

Among other things, walkable communities will have “complete streets,” which are streets designed with all users in mind - including bicyclists, public transportation vehicles and riders, and pedestrians of all ages and abilities.

Improving the “walkability” of a community is a more holistic approach to addressing ADA paratransit sustainability than other strategies previously discussed such as volunteer driver

programs, as improvements benefit all residents in a community, not just seniors and persons with disabilities.

Enhancements to the pedestrian environment that focus on improving the accessibility of bus stops and pathways from bus stops increase the potential for individuals with disabilities to use fixed-route transit. And when such enhancements are coupled with implementation of trip-by-trip eligibility, fixed-route trip-making by conditionally eligible ADA riders will increase. A more walkable community, then, increases the role that fixed-route transit can serve in meeting the transportation needs of persons with disabilities and helps eliminate trips and costs for ADA paratransit.

**Land Use Planning with the Needs of Seniors and Persons with Disabilities in Mind.** Land use and community planning efforts can influence transportation and mobility options for seniors and persons with disabilities and indirectly contribute to the sustainability of ADA paratransit by facilitating alternative transportation options that are less costly, particularly pedestrian and fixed-route transit trips.

Significantly, more compact, mixed-use communities with effective pedestrian facilities allow for more walking trips and improve both the choice and effectiveness of transit by creating higher densities and improved access to transit. This is one of the objectives behind efforts described above under walkable communities.

Planning efforts should, to the extent possible, ensure that senior housing and other senior-related facilities are sited in locations that are close-in within the community and proximate to activity centers featuring shopping, medical and other services, as opposed to locations outside the community and isolated from activity centers. To the extent possible, senior facilities should also be located close to fixed-route services. Much of the development patterns in recent decades separated land uses, resulting in greater distances between homes and activity centers and making pedestrian trips often not possible and transit trips significantly less convenient.

**Coordination with Human Service Transportation.** The region can work to promote participation by state human service agencies in coordination efforts. Until now mandates for coordination have applied only to public transportation agencies but not to the human service agencies with which coordination is needed. The resulting absence of effective coordination has contributed to the influx of human service clients on ADA paratransit described earlier. This trend appears to be driven by the need for human service agencies to cut costs. However, it can lead to inefficient schedules in which ADA paratransit and human service vehicles provide duplicative service. It can also lead to agency clients attempting to use ADA paratransit who could be trained to use fixed-route transit or who are not able to use ADA paratransit without assistance. An effective coordination process, in contrast, would seek ways for transit operators and human service agencies to cooperate in ways that provide more efficient service that reduces cost for all involved and that matches riders with the most appropriate service for them.

In the short term, transit operators or their paratransit providers can participate in providing non-emergency medical transportation (NEMT) for Medi-Cal and receive payment for this service. Federal rules that govern Medicaid (known as Medi-Cal in California) require provision of transportation to Medicaid covered services. Some transit operators have been able to establish arrangements in which trips to Medicaid covered services are placed on paratransit and paid for by Medicaid. This would make sense for the state Medicaid program when paratransit is less expensive than other available options. In California, Medi-Cal has not been interested in such arrangements, which are in any event severely restricted by Federal rules regarding permitted charges for service and “freedom of choice” among providers. However, some California transit agencies have become qualified as vendors of non-emergency medical transportation (NEMT). This has saved money for the transit operators as they can be partially reimbursed for the trips they provide, all of most of which would still need to be served by the transit operator’s ADA

paratransit service. For riders, NEMT service can provide a higher level of passenger assistance than ADA paratransit.

Other transit agencies are receiving partial payment from Medi-Cal for transit as a so-called “administrative activity” by County health care providers. These partial payments consists entirely of Federal funds, which pay for half of Medicaid administrative activities, while the half that is the responsibility of the State is covered by the transit agency.



## Chapter 5. Analysis of Strategies for Sustainability

The previous chapter presented 29 strategies for managing demand, improving productivity, controlling costs, and creating alternatives to ADA paratransit. The strategies were developed from a review of published reports, consultant knowledge of the industry, and interviews and email exchanges with 11 Bay Area operators to follow up on comments made in a survey conducted for the Paratransit Primer. The strategies were reviewed with transit operators at a meeting of the Paratransit Technical Advisory Committee on May 9, 2011. The operators then received a survey asking for their input about the strategies, including current implementation, potential cost savings, and barriers to implementation. Based on that input and independent investigation by the consultants, this report provides a preliminary evaluation of the 29 strategies, plus a discussion of consolidated transportation service agencies.

### Demand Management Strategies

#### Enhanced ADA Paratransit Certification Process

**Concept:** Three different models could be adopted to enhance the current status of eligibility screening throughout the Bay Area:

- a) **Agency Level:** Paratransit systems would be required to implement a process that exceeds simple reliance on paper applications, and instead uses in-depth interviews as well as evaluations of applicants' functional mobility by trained professionals to make more accurate determinations of applicants' travel skills.
- b) **Regional:** A Bay Area regional eligibility process would be established with a single or multiple assessment centers for in-person assessments.
- c) **Sub-regional:** Sub-regional programs, each with its own assessment center, would be established for in-person assessments.

All of the models include the capability to conduct in-person assessments (or potentially telephone interviews if conducted by sufficiently trained staff), but none of the models assumes that 100% of applicants would be required to participate in an in-person assessment. The difference between the Regional and Sub-regional models is that in the Regional model there would be a single staff group responsible for all determinations, for designing and creating the assessment center or centers, and for deciding which applicants require an in-person assessment, while in the Sub-regional model there would be multiple staff groups performing these functions. The Sub-regional model allows for more variation.

**Current Status:** The capacity of current eligibility screening processes to accurately determine paratransit eligibility varies greatly throughout the region. Only SamTrans and Tri-Delta Transit (Eastern Contra Costa Transit Authority) routinely conduct functional assessments, but the majority of transit agencies exceed the basic self-certification model. For example, San Francisco Paratransit, East Bay Paratransit (EBP), and County Connection (Central Contra Costa Transit Authority) conduct in-person interviews, while Outreach conducts telephone interviews for the Santa Clara Valley Transportation Authority (VTA) followed by in-home visits. Outreach's process replaced a process that used in-person functional assessments conducted by a third party contractor. Whistlestop Wheels, for Marin Transit and Golden Gate Transit, interviews applicants by telephone and sometimes in person.

Among Bay Area transit agencies, SFMTA (San Francisco Municipal Transportation Agency - Muni) increased its use of what it calls second level assessments for ADA paratransit applicants, now requiring its broker to ensure that 90% of new applicants and 30% of re-certifying riders have such assessments. Second level assessments are predominately in-person interviews but may also be telephone interviews or just follow-up with medical professionals in some cases. The agency has provisions for functional testing but this is used very rarely. Muni has found real benefits with the face-to-face meetings with applicants, allowing for more accurate eligibility determinations. Another result of the increased requirement for second level assessments, specifically the in-person interview, was a decrease in individuals who follow-through with their applications, which slowed the growth of new applicants.

SamTrans introduced in-person interviews as part of its eligibility assessment process in 2004, using an outside contractor, and then moved to in-person functional assessments with a new contractor in 2009. The current contractor uses a comprehensive functional model, complete with an indoor simulated streetscape to assess applicants' transit abilities. Virtually all applicants participate in the functional testing. Experience shows that the referred-to-fixed-route rate (i.e., paratransit eligibility denial rate) fluctuates, from about 2% to 5%, without major change since 2004. The transit agency did see a decrease in its number of new applicants when functional testing was introduced. This trend and the new certification process have contributed to the agency's decline in total number of ADA eligible registrants, from about 7,500 registrants in 2004 to less than 7,000. Given the relatively modest denial rate, the decline in registrants suggests that the community understands the intent of ADA paratransit and individuals do not apply unless their disabilities are such that they cannot use fixed-route. Transit agencies without such a comprehensive eligibility process typically see increases year to year in the number of eligible registrants. Interestingly, the transit agency reports that at the same time that the number of registrants has declined, trip-making has increased, suggesting that those who are eligible are using the service more intensively.

Eastern Contra Costa County Transit Authority (ECCTA) credits its eligibility process with helping contain costs for its ADA paratransit service. All applicants have a phone interview before an application is mailed out (the application is not available on the agency's website). This ensures that individuals understand ADA paratransit before they apply. In addition, the agency requires functional testing for a small subset of applicants (4%) to ensure an accurate determination and 90% of these are not given paratransit eligibility. The agency reports an overall eligibility denial rate of about 14%.

East Bay Paratransit (EBP) has also introduced a more comprehensive eligibility process, requiring applicants to have an in-person assessment, which is based on interviews rather than a functional assessment. The new process started in late 2008, after a pilot period, and is being phased in for new applicants and recertifying riders. The EBP broker conducts the assessments, which includes weighing and measuring mobility devices. The pilot period with the new process found roughly 25% of applicants opted out, not completing the application process. According to follow-up to understand why applicants opted out, the would-be applicants had various reasons, such as "not enough interest to follow-through since service needed only as back-up" and "no desire to go for an interview." Now that the process is formalized, results show a small decrease in the number of applicants, a greater number of applicants determined conditionally eligible, a small increase in denials as well as a small increase in appeals, which is a typical by-product of a more comprehensive and rigorous eligibility process. The new process also sets the stage to move towards trip-by-trip certification, which is another strategy to help manage ADA paratransit growth. EBP is also considering investing in additional staff expertise in developmental disabilities in order to handle an influx of Regional Center clients and determine with individuals could learn to use fixed-route transit.

VTA started a new process in 2006 administered by Outreach. The process uses an “enhanced phone interview” with an occupational therapist coupled with detailed third party written verification of conditions and functional abilities. Outreach contracts with SBI, Inc. (a nonprofit with a range of licensed professionals) for functional tests for appeals. Assessment is done in the field with the appellant or at appellant’s home. The process results in a 20% denial rate and 30% of approved individuals being found conditionally eligible. This denial rate is higher than seen at agencies that use in-person assessments, probably because there is less tendency for potential applicants to opt-out of the process. Outreach considers this a desirable feature, because it believes its assessments are more accurate than potential applicants’ decisions about whether to apply or not. Outreach reports a cost of about \$50 per applicant, including processing applications, conducting interviews, making and sending determinations, supplies, staff resources, ID cards, and all appeals/functional tests. As evidence of effectiveness, Outreach notes that the eligibility database has declined from over 17,000 in 2006 to about 10,500 in 2011. The ADA eligibility program is linked to Outreach’s one-stop eligibility system for a variety of non-ADA programs and services. It produces referrals to VTA’s travel training program and/or Outreach’s internal travel buddy, healthy walking, volunteer, and senior transportation programs.

**Experience in Other Areas:** National experience shows that agencies that use in-person assessment processes have found that the volume of applicants is reduced by 15% to 25% when in-person assessments are introduced. Depending on a transit agency’s average per passenger trip costs and typical frequency of use by ADA riders, an enhanced certification process has the potential for generating significant cost savings.

The Charlotte (NC) Area Transit System reports a much higher than typical opt-out rate. The agency’s functional assessments find that 10.1% of new applicants can use fixed-route. The agency also found over its first two years with the new process that just over 60% of new applicants did not complete the application process. This “opt-out” rate typically will decrease once the enhanced process is established and the community better understands eligibility for ADA paratransit. The Charlotte Transit System notes that its cost for an in-person functional assessment is \$97, approximately equivalent to the cost of three paratransit trips.<sup>18</sup> Since a typical paratransit rider will take far more trips than that, this process is probably producing very significant cost savings from limiting paratransit use by those who can ride fixed-route service, even taking into account the cost of assessing the 89.9% of applicants who are found eligible.

Another transit agency with a high opt-out rate is King County Metro, largely because the agency invests significant resources in the initial stages of the eligibility process, including distribution of a card with key questions to all interested applicants before they even receive an application package, and an in-depth telephone interview before referral to an in-person assessment. As a result of the active pre-screening process, King County Metro finds only 2% of applicants not eligible for ADA paratransit.

A wider review of functional assessments in larger metropolitan areas generally indicates lower but still very substantial denial and “opt-out” rates and higher assessment costs than reported by Charlotte, when all factors are included. In a peer review conducted for a current project by Nelson\Nygaard, the eligibility denial rate was below 2% in four systems, and around 10% in two systems. In most systems the percentage of individuals who call to inquire about paratransit and then choose not to submit an application is in the 20% – 25% range, rather than the 60% indicated in the Charlotte example. Finally, if all cost factors are included, such as transportation to assessment sites, allocated overhead costs at the transit agency for the eligibility function, in addition to the contractor costs, per unit application costs can significantly exceed the rate in

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<sup>18</sup> “Impacts of More Rigorous ADA Paratransit Eligibility Assessments on Riders with Disabilities,” prepared by the National Center for Transit Research at CUTR (Center for Urban Transportation Research) at the University of South Florida, for the Florida Dept. of Transportation, May 2009.

Charlotte. The recent peer review found fully allocated costs in the \$190 to \$400 range in four large systems.

**Applicability:** This strategy would affect all of the systems except for those that conduct in-person functional assessment, namely SamTrans and Tri-Delta Transit, as well as VTA, since the VTA/Outreach process is seen locally as an improvement over an earlier functional assessment process. The remaining systems could benefit, for example through use of the FACTS Test<sup>19</sup> for applicants with cognitive disabilities and use of functional assessments for appeals. For all those systems where enhanced eligibility could be applied, the existence of a local agency that employs professionals with the appropriate skills would be needed.

**Costs:** Costs are largely driven by assessment contractor labor costs, transportation to and from the assessments, and creating the assessment center. Based on data collected by the consultants for a project in Chicago, a Bay Area-wide process would cost well over \$2 million per year, including transportation. Short-term costs can be lowered by reducing the proportion of applicants who are required to come in or reducing the proportion who participate in functional assessments rather than interviews. However, most practitioners believe that in-person assessments lead to more accurate assessments and therefore long-term savings. Use of an “enhanced interview” process like that described by Outreach could reduce costs substantially.

The primary costs incurred in these models are for professionals such as occupational and rehabilitation therapists. Staffing costs would be higher for multiple programs than for a single program, even with multiple assessments, because of duplication of functions.

Transporting applicants to centers can represent a significant cost, depending on what proportion of applicants are required to participate in-person, and where and how many assessment centers are established. Multiple sub-regional centers are more convenient from the applicant’s perspective and result in lower transportation costs than a single regional assessment center for transit agencies because of shorter paratransit trip distances, but represent a significant financial investment to create the centers.

Simple assessment centers that are housed in a facility already owned by an agency can be limited to under \$50,000, but more elaborate centers such as the one in Los Angeles can cost \$300,000.

Of the options indicated above, establishing sub-regional assessment centers would likely be the most expensive because added staffing costs would probably outweigh transportation savings.

**Benefits:** If the first of the three models indicated above were implemented, in which each system would adopt an enhanced eligibility process, the systems that would be affected would probably see reductions in paratransit operating costs on the order of 5% to 10%. Increased cost savings at transit agencies with comprehensive assessments such as SamTrans, Tri-Delta Transit, and VTA are unlikely.

If the remaining systems adopted either more in-person functional assessments or the Outreach model, small reductions in paratransit costs are likely. A regional eligibility program would require a substantial investment, but would likely result in substantial savings. These would accrue both from an “opt out” rate of 15 -25% as found in systems with in-person and telephone interviews, and reduced trip-making due to more accurate conditional eligibility determinations, which are discussed below. Most systems that have introduced in-person assessments have seen either a slowing down of ridership growth, or an actual reduction in ridership (Pittsburgh, Salt Lake City and Santa Cruz are examples). Usually over time ridership growth will pick up again, but at a slower rate than if the system had a self-certification model.

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<sup>19</sup> Functional Assessment of Cognitive Transit Skills, a test developed by Access Transportation in Pittsburgh, Pennsylvania and available through Easter Seals Project Action.



Apart from the financial benefits to the transit agencies, the mobility benefits to consumers could be substantial. This is particularly true if the model is designed as a mobility assessment which matches applicants to the most appropriate transportation option given their functional abilities, as opposed to just determining whether an applicant is paratransit eligible or not.

A uniform regional process would create consistency but at the expense of loss of local control and increased transportation cost. Similar benefits could be achieved through enhanced process at the larger operators combined with subregional programs (Model c) that would allow multiple smaller operators to combined resources so they could afford staff with specialized training.

**Barriers:** In the past, the primary barrier to implementing enhanced eligibility screening processes was community opposition and the reluctance of decision-makers to appear to be “taking away” the right to paratransit, which is contrary to the intent of more accurate assessments. In the early years following the passage of the ADA, most systems were reluctant to make the financial investment in accurate screening programs, and to deny eligibility to people with disabilities or older adults who could take transit for at least some of their trips. However, due to spiraling paratransit costs, most large metropolitan areas in the U.S. now use some form of in-person assessments.

A practical barrier is the difficulty of finding contractors with the capacity, expertise, and desire to properly conduct functional assessments. In addition, all of the large operators in the Bay Area have expressed skepticism that their existing processes need enhancement beyond small changes, such as adding a FACTS test for some applicants.

Implementing any process other than enhancements to individual transit agency processes would require an active role by MTC.

**Conclusion:** An enhanced eligibility screening program is probably the most effective tool allowed by the ADA that enables transit agencies to manage paratransit demand and costs. An effective program can also meet the ADA goal of expanding mobility options for all people with disabilities. Depending on the transit agency, available cost savings range from none to substantial. There appears to be little support among Bay Area transit agencies for a uniform regional process, but smaller operators would benefit by combining their eligibility programs.

## Implementing Conditional Eligibility

**Concept:** Paratransit systems that have accurate eligibility screening programs - usually but not only those with in-person functional assessments - are able to establish administrative procedures that allow for screening of trip requests from those who are conditionally eligible. The more accurate the screening process, the greater the ability to provide detailed information on registrants' functional abilities to ride transit some of the time. One of the most common conditions placed on registrants' ability to ride fixed-route service is distance and path of travel. As a result, a key element in effective implementation of trip screening is the capacity to determine environmental barriers that can impact a registrant's ability to get to a fixed-route bus stop or station.

For conditions such as temperature or ability to travel in darkness, reservationists can apply conditions at the time trips are requested. However, in the case of conditions based on whether a person can negotiate a particular path of travel to and from transit stops, specialists need to make an evaluation, often based on field work. They then record the fact that a particular trip is one that a certain individual can make using fixed-route transit. If that person requests this paratransit trip in the future, the reservations software shows a notification that the rider is not eligible for that trip.

**Current Status:** Currently Outreach, SamTrans, and Sonoma County conduct at least partial trip screening of conditionally eligible riders, and Marin Transit is in the process of implementing this

procedure. At Outreach, all conditional riders are monitored each month for trip patterns. The scheduling system incorporates information about conditions and trip patterns and this is linked to a web-based tool so reservationists can suggest taking a particular trip on fixed-route transit. No trips are denied at the time of a trip request, but there is follow-up for each trip to offer support (travel training; travel buddies, etc.) to take that trip in the future on fixed-route transit if feasible and to identify those trips that must be made on paratransit.

**Experience in Other Areas:** Some transit agencies that use comprehensive certification processes find 30% to 45% of applicants conditionally eligible, that is, able to use fixed-route service for some of their trips.<sup>20</sup> Data from 21 transit agencies that use conditional eligibility, collected in 2006 for research on ADA paratransit demand estimation, showed that an average of 21% of applicants were found conditionally eligible, but not all of the agencies used truly comprehensive processes.<sup>21</sup>

A very conservative estimate of savings comes from Seattle, where King County Metro quantified savings from implementing conditional eligibility in 2007.<sup>22</sup> The transit agency found that almost 25% of conditionally eligible riders reviewed in late 2006 could use fixed-route transit for particular round trips, resulting in almost 10,000 trips not taken on ADA paratransit with an annual cost savings of over \$218,000 based on the marginal cost of paratransit trips at that time. Since then King County Metro has expanded its enforcement of conditional eligibility. Data from King County Metro for 2009, provided for this study, indicate that a total of 22,000 trips were taken on fixed-route transit by ADA paratransit riders with conditional eligibility that otherwise would have been provided by ADA paratransit. This provided an annual savings in ADA paratransit operating costs of \$845,000. The transit agency calculated that its annual cost for a mobility specialist and other staff time to conduct the pathway reviews of the trips was \$277,000, which provided a net annual savings of \$568,000 compared to a total annual operating cost of about \$44 million.

**Applicability:** The majority of systems in the Bay Area could apply trip-by-trip eligibility screening if they are not already doing it. Implementation is largely predicated on enhancements to the current eligibility processes throughout the region.

**Costs:** Assuming the costs that have been incurred by an agency to enhance its eligibility program, the primary additional cost associated with trip screening is the labor cost for individuals who conduct pathway reviews/environmental assessments or monitor trip patterns. In these assessments, agency staff (or contractors) identify mobility barriers along the path of travel of frequently used locations in the community. For very large systems, one to three additional full-time staff could be required to fill this function, whereas for smaller systems this could be a part of the job description of existing clerical staff who can be trained to conduct assessments.

**Benefits:** Data from Santa Clara County, Salt Lake City, and Pittsburgh, all of which screen trips by conditionally eligible riders, indicate much lower trip rates for conditionally eligible riders than for riders with unrestricted eligibility. Salt Lake City and Pittsburgh report that about one-third of applicants are conditionally eligible and they use paratransit at about half the rate of those found fully eligible. For Santa Clara County, Outreach reports that 30% of applicants are found conditionally eligible but they make only 7.6% of trips, mainly because two-thirds of the conditionally eligible people do not ride at all in any given month. These statistics would suggest that screening trips by conditionally eligible riders could reduce demand by as much as 17% (one half of one-third). However, these calculations do not account for the likelihood that conditionally eligible riders would use paratransit at lower rates even without trip screening. The more

<sup>20</sup> "Selected Topics in Paratransit Eligibility: Conditional Eligibility," Project Action Webinar, conducted by K. Hoesch, ACCESS Transportation Systems, Pittsburgh, PA, 2-8-2008.

<sup>21</sup> TCRP Report 119, "Improving ADA Complementary Paratransit Demand Estimation," D. Koffman et al., 2007.

<sup>22</sup> TCRP Synthesis 74, "Policies and Practices for Effectively and Efficiently Meeting ADA Paratransit Demand," by D. Chia, Planners Collaborative, 2008.

conservative calculation from King County Metro in Seattle, which estimated the actual paratransit trips no longer taken by specific individuals for whom it has conducted pathway reviews, show a net savings in operating cost of 1.3% after allowing for the cost of conducting the reviews.

**Barriers:** A substantial investment in staff effort is needed to conduct pathway reviews and to build up a database on barriers. However, the database can be established through the process of conducting reviews and does not need to be in place to start. There is likely to be resistance from riders who consider the process intrusive or who disagree with findings about specific trips. Enforcement of conditional eligibility would need to take account of difference in the capabilities need to ride different transit systems. For example bus drivers provide some degree of assistance, while BART drivers do not.

**Conclusion:** If the previous strategy of enhancing eligibility screening is widely implemented, it would create the opportunity for incremental implementation of trip screening where it is not already in use.

## Paratransit Feeder to Fixed-Route Service

**Concept:** Some paratransit riders whose eligibility is based solely on inability to get to and from transit stops can be offered only a ride to and/or from the transit stop, at least for some of their trips.

**Current Status:** No Bay Area operator has a routine practice of offering only feeder rides for certain trips based on eligibility. Some operators do schedule occasional transfers to fixed-route service.

**Experience from Other Areas:** A recent TCRP synthesis found only three large paratransit operators that have implemented this strategy—Pierce Transit, Utah Transit Authority, and Access Transportation in Pittsburgh, Pennsylvania.<sup>23</sup>

**Applicability:** Feeder service can be used by any transit operator, but is most easily applied where there is rail service or long distance, high-frequency bus routes. It requires an eligibility process that obtains detailed information about riders' abilities. Feeder service is administered as part of a program of trip-by-trip eligibility screening. The three most common paratransit scheduling software packages all include modules that can facilitate scheduling feeder trips.

**Cost:** Implementing feeder service requires planning and coordination with fixed-route transit operators, establishing transfer protocols and procedures, training of fixed-route transit drivers, and public input and consultation.

**Benefits:** Most of the systems reviewed in TCRP Synthesis 76 have implemented feeder service as part of a program of trip-by-trip eligibility and have not calculated the precise level of savings. The only known detailed calculation of savings from feeder service was conducted in 1996 and found savings of about 4%, mainly through reduced usage of paratransit, at Pierce Transit in Tacoma, Washington.<sup>24</sup>

**Barriers:** Feeder service has not experienced widespread application because of a variety of factors, including concern for the impact on the mobility of riders; a perception that this model is difficult to implement; and lack of consensus about the cost savings associated with feeder implementation. Transfers would need to be timed to be as seamless as possible, considering safety concerns if there is a long wait. It may also be necessary to address concerns on the part of fixed-route operations staff concerning the impact of large numbers of additional riders with

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<sup>23</sup> TCRP Synthesis 76.

<sup>24</sup> TCRP Web-Only Document 2, "Evaluating Transit Operations for Individuals with Disabilities," 1997.

disabilities. In other parts of the country, there are sometimes concerns about accessibility of the transit system, but this should not be a major issue in the Bay Area.

**Conclusion:** Paratransit to fixed-route feeder service could be implemented at most Bay Area transit systems as part of a program of implementing conditional eligibility.

## Travel Training

**Concept:** Travel training involves teaching people to independently use fixed-route public transportation, and typically is focused on people with disabilities and seniors. Varieties of travel training include: group training, one-on-one individualized training, and peer-to-peer training. Travel training may be conducted by transit agency staff, specialized professionals such as certified Orientation and Mobility (O&M) trainers working for non-profit organizations or for profit trainers, and volunteers.

**Current Status:** All but one of the Bay Area transit agencies participating on the Paratransit Technical Advisory Committee have indicated either through the recent TSP survey or on their websites that they have implemented some degree of travel training, but several indicated opportunities to expand or enhance their existing programs.

SamTrans has provided travel training since 2000, focusing on persons with disabilities. The training is provided by specialists at outside agencies and includes an Orientation and Mobility specialist who works with people with vision impairments. SamTrans also has mobility ambassadors who work with seniors and help them learn how to ride transit, with the objective of encouraging transit use while they still have mobility options and before they might apply for ADA paratransit service. The transit agency also attends CHP and AARP safe driver classes for seniors, showcasing a fixed-route bus and demonstrating its use, which are additional efforts to encourage seniors to consider and use fixed-route transit before they get to the point of applying for ADA paratransit.

Santa Clara VTA also provides travel training to encourage use of fixed-route service by persons with disabilities and actively markets fixed-route transit services to seniors, practices which help slow the growth of ADA paratransit demand and cost.

**Experience in Other Areas:** TCRP research found that more than 50% of transit agencies responding to a survey offer travel training, with larger transit agencies more likely to provide such training than smaller agencies.<sup>25</sup> Research done in Northern Virginia found that one-on-one travel training is considerably more effective than group sessions and that this is true for programs focusing on persons with disabilities as well as seniors.<sup>26</sup>

WMATA in Washington, DC has implemented comprehensive travel training, some of which is one-on-one training provided through local Centers for Independent Living. Those receiving the individualized training are surveyed three months after the training to assess changes in travel. A recent survey of 183 individuals receiving the one-on-one training found that 90% reported an increase in fixed-route transit use (primarily bus use but also some rail use) and only 10% reported no change.

**Applicability:** Travel training is already being provided by most of the transit agencies, but there are opportunities to expand travel training, for example with more individualized training as well as working with school districts to help them train school-aged students with disabilities so that more of the young people graduate as competent bus riders. EBP notes that its current travel training efforts, including a program to work with school districts, appear to be more successful

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<sup>25</sup> TCRP Synthesis 74.

<sup>26</sup> Life – Get on Board! The Northern Virginia Transportation Commission's Public Transit Travel Instruction Program for Seniors, Final Report, April 2008.

than some prior efforts that were not considered cost-effective. There may also be opportunities for transit agencies to partner with Regional Centers to support and help ensure their efforts to travel train Regional Center clients who are good candidates to use fixed-route transit. Working with Regional Centers may require a process of education at the state level to stress the importance of individual centers fulfilling their mandate to provide travel training.

**Costs:** Costs for travel training depend on the type of training provided and type of trainer. Group training is often given by transit agency staff, where efforts may be part of the marketing/public relations department, and costs are typically relatively small. Individualized one-on-one training is more costly, but costs will depend on the type of trainer and how many trainers are used. Available research on one-on-one travel training suggests that it takes on average 11 to 18 hours to effectively train one individual with a disability,<sup>27</sup> so it is labor-intensive compared to group training. Outside consultants or professionals such as certified O&M trainers will be more costly than in-house staff. Use of transit agency staff will increase agency costs if additional staff is hired to provide the individualized training. Use of volunteers will be least costly, though there are administrative costs (e.g., background checks on the volunteers) and staff costs to manage the volunteers and their work.

**Benefits:** Benefits for transit agencies accrue when people with disabilities use fixed-route service instead of ADA paratransit, given the large cost differential between the two service types. SamTrans has reported data on recent travel training efforts, showing that eight individuals were trained with an annual net cost savings of approximately \$5,000 per trained person. SamTrans estimates paratransit costs avoided per trained rider at \$6,000, with training costs of \$800 to \$1,000. In general, there appear to be cost savings in the near term, but it is difficult to quantify long term cost savings because there is little available data on how long persons who complete travel training continue to use fixed-route transit and how many ADA paratransit trips are not taken.

TCRP research quantified cost savings several years ago for travel training conducted in Sacramento by Paratransit, Inc. For FY 2002, the agency estimated cost savings for ADA paratransit of just over \$1 million from training 587 people. The analysis included estimates of trips that would be taken on fixed-route transit and formerly would have been on ADA paratransit, and costs for the training and value of free bus passes given to the trainers and trainees.<sup>28</sup> However, other research on one-on-one training found much smaller numbers of individuals trained annually by transit organizations, typically in the range of 30 to 80, with one agency reporting 146 trained.<sup>29</sup>

Importantly, benefits also accrue to the individuals who receive the training. Those who use fixed-route transit can travel more spontaneously, at a lower cost, and in an integrated setting compared to ADA paratransit.

**Barriers:** Issues and barriers with travel training have been identified as:<sup>30</sup>

- Generating interest among potential trainees to learn fixed-route transit skills;
- The time and coordination needed to effectively manage volunteers;
- Effectively addressing the range of disabilities that trainees have to help them learn transit skills; and

<sup>27</sup> National Travel Training Summaries, Final Report, prepared by KFH Group for the Northern Virginia Transportation Commission, 2007; TCRP Report 91, Economic Benefits of Coordinating Human Service Transportation and Transit Service, by J. Burkhardt, D. Koffman, and G. Murray, Transportation Research Board, 2003.

<sup>28</sup> TCRP Report 91.

<sup>29</sup> National Travel Training Summaries.

<sup>30</sup> National Travel Training Summaries.

- Adequate funding.

To address the first barrier listed, several travel training program managers at transit agencies have focused efforts on younger people with disabilities, with the objective of helping them become competent transit users before they start relying solely on ADA paratransit. Another promising approach may be the recent trend among some larger transit agencies to bundle all accessibility related functions into one location, so that ADA eligibility certification, travel training, trip planning services, reduced fare on fixed-route transit, and other mobility management type activities are provided at one central place.

**Conclusions:** Expanding travel training would increase mobility and help reduce growth of ADA paratransit demand.

## **Fare Incentives to Use Fixed-route Service**

**Concept:** Allow ADA-eligible riders and sometimes a companion as well, free use of fixed-route transit service to encourage ridership shift from paratransit to fixed-route service.

**Current Status:** Most large Bay Area transit agencies already offer free or very inexpensive fixed-route service for ADA-eligible passengers (and for others in San Francisco).

SamTrans allows ADA eligible riders to use fixed-route buses for free by showing their ADA paratransit ID card, eliminating the cost of paratransit trips that they might have taken instead. This program began ten years ago, and has been liberalized over the years: at first, ADA eligible riders received just discounts for fixed-route use during off peak times for local transit only but, with incremental changes over the years, the program now provides free trips on all services at all times. Unfortunately, use of this program has been not quantified due to limitations of fixed-route fare collection procedures. VTA also gives free trips on fixed-route transit for ADA eligible persons once the person shows their picture ADA ID card. As at SamTrans, no data is available to quantify use of this program.

Other transit agencies provide discounts that exceed Federal requirements in terms of the amount of the discount and all-day availability. BART provides a 62.5% discount for seniors and people with disabilities at all times. AC Transit provides a local monthly pass and one-fourth the regular price to seniors and people with disabilities, while SFMTA's senior/disabled pass costs one-third the regular price.

**Experience in Other Areas:** Evidence about the impact of free or discounted fares for ADA eligible riders is very sketchy and inconclusive. TCRP research from 1997 found shifts from paratransit to fixed-route service of up to 23% of total paratransit demand as a result of fare incentives.<sup>31</sup> However, some transit agencies in large urban areas have found that this type of incentive may increase demand for ADA eligibility, with individuals interested in free use of fixed-route service and not solely ADA paratransit certification. In this case, there is also lost revenue from fixed-route fares to consider. For example, Sacramento Regional Transit recently eliminated its free-fare program for ADA eligible riders because it was believed to be encouraging people to apply for ADA eligibility just to get the free rides. In such cases, the transit agency may provide the free fixed-route fare incentive only to those ADA eligible riders who have conditional eligibility, confirming that those individuals are able to use fixed-route service for some of their trips. Combining fare incentives with a rigorous eligibility process reduces the risk of unintended consequences from the fare incentives.

TCRP research found that more than two-thirds of transit agencies offer free or reduced fares for ADA certified riders, and in some cases, for their Personal Care Attendants as well. Larger transit

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<sup>31</sup> Evaluating Transit Operations for People with Disabilities, by Multisystems, Inc. and Crain & Associates, Inc. Transit Cooperative Research Program, April 1997. (TCRP Web-only Document 1)

agencies were more likely to offer such fare discounts than smaller agencies.<sup>32</sup> However, the research did not clearly distinguish whether some of these discounts may be the regular discount offered to all riders with disabilities and it did not determine whether these discounts results in net savings in paratransit demand or operating costs.

In Sarasota, Florida, the transit agency provides free bus passes to all ADA eligible riders and discounted passes (\$2.00 per pass) to those ADA applicants who are determined ineligible for ADA paratransit. Approximately 650 passes are provided each month through this policy, with the large majority going to ADA eligible riders.<sup>33</sup>

**Conclusion:** No further action is needed.

## **Partnering with Community Agencies to Supplement ADA Service**

**Concept:** Transit agencies provide support to community agencies in transporting individuals with disabilities by providing funding or some combination of vehicles, maintenance services, fuel and driver training. The community agencies are expected to provide some trips that would otherwise be provided on ADA paratransit.

**Current Status:** This particular type of partnership has been implemented to a limited extent in the Bay Area. CCCTA has provided vehicles to community agencies. Outreach has created web-based transportation management software that is available free of charge to community agencies, which is described under the heading of Mobility Management. San Francisco, Marin, and Sonoma County all have limited applications.

CCCTA recently advertised availability of ten retired paratransit vans to community based organizations that serve the elderly and disabled populations in Central Contra Costa County. A New Freedom grant in the amount of \$62,500 will be used to reimburse successful applicants for 50% of their van maintenance expenses until the funds are gone. CCCTA ensures that the vans are in good running order and provides complete maintenance records and free driver training. The agencies that receive the vans must provide at least 50 trips each month for two years to ADA eligible clients who would otherwise be using CCCTA's ADA paratransit program for their trips.

San Francisco MTA's Group Van program is also a form of community partnership. Group Van is a component of the paratransit program that is tailored to transporting groups of clients to community agencies. By concentrating group trips, vehicle productivity is greatly increased and operating cost per trip is reduced. Some agencies also contribute vans that they purchase using capital funds available to non-profit agencies (FTA Sec. 5310). Some of the Group Van services to agencies that serve seniors is provided by SFMTA in coordination with the SF Human Services Agency Department of Aging and Adult Services which funds those particular services.

**Experience in Other Areas:** National research through TCRP documented a number of examples where such partnerships offered cost savings to the transit agencies. One large suburban transit agency in Southern California (apparently Orange County Transportation Authority, though un-named in the TCRP report) has agreements with two human service agencies that serve clients with disabilities, virtually all of whom are or would be ADA-eligible. The transit agency provides an annual operating subsidy to the two agencies, one of which directly operates service and the other contracts with a taxi company. The two human service agencies carried more than 55,000 passenger trips in FY 2005. This was less than 5% of total annual ADA paratransit ridership, but given the large difference in cost per passenger trip for the

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<sup>32</sup> TRCP Synthesis 74.

<sup>33</sup> CUTR report.

transit agency compared to the human service agencies, the transit agency saved almost \$1.2 million.<sup>34</sup>

King County Metro contracts with small community-based human service agencies that serve individuals with disabilities. The program is known as Community Access Transportation (CAT). In 2010, Metro had contracts with 24 agencies to operate 86 vans. Metro provides the vans as well as fuel, maintenance services, insurance and driver orientation, allowing those agencies to transport their own clients, many of whom would be ADA eligible. The cost of the program for Metro was \$960,269. CAT provided 250,239 boardings, up 18% from the previous year, including about 122,568 boardings by ADA-eligible customers (not including people who would be eligible but don't bother applying). The implied cost per ADA-eligible trip is just \$7.83, compared to \$38.64 on Metro's ADA paratransit system.

A variation of community partnerships is the Orange County Transportation Authority's Senior Mobility Program (SMP). OCTA funds the efforts of cities in the county to provide locally based transportation services for their seniors. OCTA provides operating funds and smaller transit vehicles for the local senior programs, which provide transportation services that are more specialized than OCTA's fixed-route network but are not formal ADA paratransit service. Significantly, the passenger trip costs on the local senior programs are substantially less than trip costs on OCTA's ADA paratransit service. According the data for fiscal year 2009, the average cost of an SMP trip was \$13.28, of which just \$6.97 was paid by OCTA; in comparison an ADA paratransit trip cost OCTA \$28.76 in the same year.

Eighteen cities and three non-profit agencies serving seniors participate in OCTA's Senior Mobility Program. According to data provided by OCTA for earlier work by the consultants, OCTA contributed \$1.7 million in 2009 for SMP services. Research has found that this program is effective and serves as a demand management strategy: those cities with local senior transportation services funded through the Senior Mobility Program have lower use rates on the OCTA's ADA paratransit service than those cities without such local programs.<sup>35</sup> The result is cost savings to the transit agency given the significantly lower cost per passenger trip for the locally-based programs.

**Applicability:** There need to be available partners, that is community agencies with existing transportation programs or the interest and capacity to provide some transportation for their clients. This strategy is most applicable where community agencies believe that their own transportation program offers some advantages for their agency and their clients. Many agencies that would be potential partners already receive ADA paratransit service and have limited incentive to establish their own transportation programs. Opportunities may exist for East Bay Paratransit, Marin Transit, San Francisco, Sonoma, and VTA.

**Costs:** Transit agencies would incur costs to purchase vehicles or rehabilitate existing vehicles and to provide operating funds, maintenance services, or other support.

**Benefits:** King County Metro's CAT program, involving partnerships with 24 agencies and 86 vehicles in 2010, is estimated to reduce ADA paratransit operating cost by about \$3.5 million compared to an annual operating budget of \$47.5 million, or 7.4% after taking into account the subsidies and support provided by the transit agency.<sup>36</sup> Even if only half of the ADA eligible trips provided by the partner agencies would actually have taken place on ADA paratransit, the savings would still be 2.5% of annual ADA paratransit operating costs. This is a mature program

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<sup>34</sup> TCRP Report 124, Guidebook for Measuring, Assessing, and Improving Performance of Demand Response Transportation, by KFH Group, Inc. 2008.

<sup>35</sup> Measuring Demand Management Impacts in a Sustainable Compliance Environment for the Americans with Disabilities Act: Orange County, California, Transportation Research Record, Vol. 2030, by H. Menninger et al., 2007.

<sup>36</sup> Calculated from data in King County Metro's "Accessible Services Monthly Report December 2010."



that has grown to its present size over at least eight years. OCTA long-standing arrangements to support service by other agencies that were estimated to reduce the cost of providing ADA paratransit by about 4% as of 2005.<sup>37</sup> In addition to saving on ADA paratransit costs, these partnerships increase the level of service available in the community. Clients attending the agencies involved receive customized service tailored to their needs, without needing to go through the formal ADA paratransit eligibility process.

**Barriers:** Where there is an established pattern of the transit agency providing paratransit service for human service agencies, it will be very difficult to convince these agencies that they should take over responsibility for providing service, regardless of support provided by the transit agency. Instead partnerships are more likely to succeed in diverting future growth in demand.

**Conclusion:** Partnerships with human service agencies are promising for some but not all transit agencies, where operating cost savings of more than 2% may be achievable after several years.

## Align Service to ADA Requirements

**Concept:** Transit agencies establish service policies that correspond precisely to ADA requirements regarding service area, hours, next-day reservations, and fares.

**Current Status:** Many Bay Area transit systems already adhere very closely to the ADA minimum requirements. Exceptions include the following:

- Some systems that serve areas beyond the ADA-required area are Tri-Delta Transit, County Connection, Marin Transit, and SamTrans. VTA allows trips to or from an extended service area, but only for a fare of four times the regular ADA paratransit fare. However, Tri-Delta Transit already charges a premium fare for out-of-area trips (i.e. higher than would be allowed for a trip within the ADA service area). Marin charges more for trips beyond the ADA area, but still much less than would be allowed even for trips within the ADA area. EBP provides service to and from points throughout San Francisco, with financial participation by San Francisco MTA, as an alternative to requiring transfers to and from San Francisco Paratransit. County Connection provides service within one and one-half mile of regular fixed-route bus service on weekdays, twice the required  $\frac{3}{4}$  miles.
- Systems with fares that are significantly less than allowed by ADA include Tri-Delta Transit, Marin Transit, and San Francisco MTA.
- All systems in the Bay Area take reservations more than one day in advance, but it is not clear that there is any cost or productivity penalty from this practice. VTA allows same-day reservations, but only for a fare of four times the regular ADA paratransit fare.
- All systems also provide subscription service, which is not required by ADA, but there is no clear evidence about whether there is any cost or productivity penalty from this practice. Most practitioners believe that subscriptions help increase productivity, although it is probable that they also increase demand by making service more convenient.
- Reportedly, many systems also provide extra accommodation for passengers who cannot be left alone, for example, in the case where there is no one at home to receive them. The extent of this practice cannot be confirmed. When this happens repeatedly, the passenger can be required to ride with an attendant.

VTA completed a realignment of its ADA paratransit service area to the area and hours of the comparable fixed-route service in 2010, which has not only helped contain operating costs but also contributed to increased productivity (some paratransit beyond what the ADA requires is

<sup>37</sup> Measuring Demand Management Impacts in a Sustainable Compliance Environment for the Americans with Disabilities Act: Orange County, California, Transportation Research Record, Vol. 2030, by H. Menninger et al., 2007.

available as premium service, with additional charges). This policy change was done in several steps, starting in 2008, and the result has allowed for more efficient scheduling with greater ride sharing. This, plus vehicle sharing established with the broker's new mobility management approach (discussed later), have contributed to an increase in productivity from 2.3 to 2.5 passenger trips per hour from FY09 to FY10.

Sonoma County Transit has also restructured its ADA paratransit service so that it now serves the areas within  $\frac{3}{4}$  mile of the fixed-route service with service hours parallel those of the fixed-routes. Cost savings were reportedly very modest and most of the small number of riders who are now beyond the service area have been able to use local paratransit options to travel into Sonoma County Transit's service area for their longer trips. To the extent there were issues with the restructuring, it revolved around the need to transfer from the local provider to the County's service. The change to ADA paratransit service hours so they parallel fixed-route is facilitated by the transit agency's new scheduling software, which uses color codes to identify when an ADA paratransit trip can be scheduled.

**Experience in Other Areas:** OCTA in Orange County, CA restructured its service area in 2005, realigning it to ADA requirements. The transit agency calculated that approximately 2% of daily trips had an origin, destination or both outside the ADA-required corridors, affecting 315 ADA eligible riders. A limited same-day taxi program was initiated at the same time as the realignment, in part to provide an option for the affected riders. In addition to some cost savings for the ADA trips no longer carried, the transit agency cited the smaller service area as one factor among others that contributed to an increase in productivity in the year following the realignment, from 1.91 to 2.01 passengers per revenue vehicle hour.<sup>38</sup>

**Applicability:** Given the current policies, the principal opportunities are: 1) fare increases by agencies charging less than allowed by ADA; 2) service area reductions by agencies serving larger areas than required by ADA; and 3) stricter application of attendant requirements for passengers whose inability to be left alone causes repeated service disruption. Eliminating subscription service would also be possible, but would make it extremely inconvenient for many passengers to use paratransit.

**Costs:** Applying exact ADA service areas would involve some extra cost for creating new service area definitions within scheduling software and keeping these service area definitions up to date. Stricter application of attendant requirements would trigger some costs for hearing appeals.

**Benefits:** All of these changes would reduce costs but would do so mainly by eliminating or discouraging some amount of travel by people with disabilities. From the point of view of passengers, this would definitely not be a "benefit," though it would make paratransit more financially sustainable.

- Fare increases would raise some additional revenue and substantially reduce demand at the few systems where significant fare increases are possible. For example, doubling the fare in San Francisco or for Marin local service, could be expected to reduce demand by roughly 20%.<sup>39</sup> For SamTrans, a smaller fare increase from \$3.75 to the ADA maximum of \$4.00 would be expected to reduce demand by roughly 2%. (SamTrans raised its paratransit fare to \$3.75 effective July 1, 2011.)
- Without conducting a detailed service area analysis, it is not possible to give a meaningful estimate of service area changes. For SamTrans the reduction in demand would probably be at most a few percent, but there could be a larger improvement in productivity by

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<sup>38</sup> Measuring Demand Management Impacts, Menninger et al.

<sup>39</sup> Based on an elasticity of -0.36, applied using the formula  $\text{New Demand} = \exp(-.36 \times \ln(\text{New Fare} / \text{Old Fare})) \times \text{Old Demand}$ .

reducing the number of long trips. For Marin Transit, Sonoma County Transit, and County Connection, the reduction could be larger because of the size of the areas involved.

- The effect of stricter application of attendant requirements is much harder to judge. Establishing such a policy and conducting widespread education about it could be useful in stressing the limitations of ADA paratransit for certain trips now provided by human service agencies, notably the Regional Centers.

**Barriers:** It likely that there is little support in the community or among elected officials for increasing fares. Limiting service areas may also be unpopular. Stricter application of attendant policies, if properly explained and planned, may find more support than fare or service area changes.

**Conclusion:** If certain areas have the local funding to maintain low fares or extended service areas, then there is no obvious regional interest in pushing for changes to these policies, and if funding no longer permits lower fares or extended areas to be served, then cutting back is a local decision. However, it is important to preserve these as policy options as needed, especially if regional sources of funding were involved in the future. Support should be given to local operators that wish to implement stricter application of attendant policies.

## **Premium Charges for Service Beyond ADA Requirements**

**Concept:** Charge extra for components of paratransit service that go beyond what the ADA requires. This is an alternative to simply cutting back to ADA requirements. Examples of premium service include service areas beyond  $\frac{3}{4}$  mile on both sides of fixed-routes, same-day trip requests, open returns, and “agency service” tailored to the needs of human service agencies. The purest case of agency service, as defined by ADA regulations, involves a situation in an agency is guaranteed a certain quantify of service and has flexibility to specify which riders will be carried. However, any service feature that exceeds ADA requirements could be basis for an agency fare, for example a guaranteed maximum ride time that meets the requirements of the agency’s funder and is stricter than required by ADA.

**Current Status:** As just described, a few Bay Area transit systems offer paratransit services that exceed ADA requirements. A few charge extra for these services. VTA charges four times the ADA fare for open returns, same-day service, sending a second vehicle, or for trips to or from an extended service area. VTA’s broker, Outreach, also has arranged higher fares for some human service agencies. SamTrans charges premium fares for several human service agencies. Outreach reports some instances of premium fares for human service agencies as well, although this does not appear to be an official VTA fare policy. Marin Transit charges \$2.50 for trips in an extended service area, compared to \$2.00 for trips in the ADA-mandated area. Tri-Delta Transit charges \$4.50 for trips beyond the Tri-Delta ADA service area, compared to \$2.25 for trips within the service area.

**Applicability:** Premium charges could apply to the few cases of agencies that serve an area larger than required by ADA and do not already charge significantly extra, and also to agency service. The agencies that could institute or increase premium fares for service to/from non-ADA areas include SamTrans, CCCTA, and Marin Transit. All transit systems could potentially implement agency fares.

**Benefits:** Charging a premium fare for services beyond ADA requirements is an alternative to simply cutting back to ADA requirements. Where service already corresponds to ADA requirements, it is unclear that there is any cost benefit to adding premium service. Where service exceeds ADA requirements, but with no clear cost (for example offering subscriptions or taking reservations more than one day in advance), the rationale for a premium fare is also unclear.

The clearest benefit would be from use of agency fares, since all ADA paratransit service provide large numbers of trips for clients going to and from programs of human service agencies.

**Barriers:** It may be difficult to establish the basis for identifying the specific trips that are agency trips and to negotiate an appropriate fare. Community opposition would be likely, since most agencies operate with very tight budgets and/or would pass on the higher fares to their clients.

**Conclusion:** Except for agency fares, there are few remaining opportunities for application of premium fares. Individual systems that have some room for area-based premium fares, such as Marin Transit, CCCTA, and SamTrans should determine whether this is an appropriate strategy for themselves. Agency fares have general applicability. Despite the barriers to implementation, a regional policy in favor of agency fares may be important in the face of an expected influx of human service clients on ADA paratransit.

## Taxi Trip Subsidies

**Concept:** A transit agency or other entity provides subsidy funding to pay some portion of taxi fares for qualified individuals. The subsidy can be provided using scrip, vouchers, debit cards, or pre-authorization through a reservations center. If some trips are diverted from paratransit as a result, and if the per-trip subsidy is much less than the operating cost of an ADA paratransit trip, then the cost of ADA paratransit is reduced and riders' mobility is increased.

**Current Status:** San Francisco is the only large transit operator in the Bay Area that currently has a taxi trip subsidy program. In Alameda County, all of the cities in the northern part of the county and some cities in other parts of the county have taxi trip subsidy programs with funding from County Measure B. In Santa Clara County, Outreach provides subsidized taxi rides to participants in its senior transportation service. Several North Bay agencies also have taxi subsidy programs.

SFMTA (Muni) is among a number of large, urban transit agencies across the country that use taxi services as a supplement to their ADA paratransit program, offering a lower-cost alternative to the next-day ADA paratransit service.

SFMTA has used taxis as part of its paratransit program since 1981, and taxis have continued to play a key role after implementation of ADA service in the 1990s. At the outset of the ADA service, taxis were the only mode serving ambulatory ADA riders taking individual trips. With changes over the years, taxi service is now a supplemental service for ADA eligible riders. An ADA eligible rider must first establish a ride history on the traditional next-day ADA service, and, after establishing that history, is then offered the use of the supplemental taxi service. There are some exceptions to this: riders over 80 years old, those using wheelchairs, and those going to kidney dialysis are offered taxi service as an option when they are first determined ADA eligible. Those riders determined eligible for the taxi service are provided a monthly dollar allotment to purchase taxi trips, originally in scrip and now through a debit card, based on their trip needs. Riders pay \$5.00 per \$30.00 worth of taxi service.

Muni's original taxi service impacted ADA paratransit demand because of the popularity of a same-day service, but limiting new users of the program and establishing the taxi service strictly as a non-ADA supplement (as described above) made the taxi service more cost-effective. Because the cost per taxi trip is considerably less than the cost of traditional van-based trips, Muni realizes cost savings. Based on 2008 data, the transit agency's total cost per taxi trip was \$11.33, which was roughly half the cost per trip on the van-based ADA service.<sup>40</sup>

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<sup>40</sup> The fully-loaded cost for a taxi trip was reported as \$14.21 in 2008, which includes all of Muni's administrative overhead. Data on taxi trip costs provided by presentation at a TRB Paratransit Committee sponsored workshop in January 2008.

Further changes to the Muni's taxi service came in late 2009 with introduction of a debit card for payment (replacing pre-sold paper scrip), which allows for extensive monitoring of the taxi trips not feasible with scrip and enhanced enforcement of program rules. General experience with user-side taxi programs has shown that unauthorized use typically impacts the cost of such programs, since there may be limited control over paper vouchers or scrip.<sup>41</sup> With the new debit card, Muni has found that its cost for the taxi service has decreased 13% from FY09 to FY10.

A recent application of taxi trip discounts is the Intercity Taxi Scrip program implemented by several city transit systems within Solano County under the leadership of Vacaville's Transit Manager. The new service was formed to fill a need when it was determined that the former inter-city paratransit program, Solano Paratransit, would be dissolved at the end of fiscal year 2009 due to funding constraints. The cities pooled resources and expertise to create an additional option for ambulatory paratransit certified disabled individuals to travel cross-county at an affordable rate. Clients are able to purchase \$100 of taxi scrip for \$15. For riders needing to travel between cities, the program offers riders an alternative to full-price taxi service or finding appointments with multiple local paratransit providers and transferring between them. Compared to paratransit service, taxi rides offer same-day service, faster travel time because the rides are not shared, and flexibility to deal with appointments that run late. Actual results have not been determined, but the program was expected to yield significant savings for the cities (about \$34,000 for Vacaville alone). The average cost of providing a ride on Solano Paratransit was \$81, while the average cost of a taxi ride is only \$29 – \$30. Vacaville's Transit Manager received 2010 Doris W. Kahn Accessible Transportation Award for his leadership in establishing the Intercity Taxi Scrip program.<sup>42</sup>

**Experience in Other Areas:** Other transit agencies that offer taxi trip discounts include RTD in Denver, Pace in Chicago, Houston METRO, the Baltimore MTA, and Minneapolis/St. Paul Metro Transit. Baltimore, and Chicago use smart cards that are similar in concept to Muni's debit cards though different in implementation. Using smart cards for taxi discounts depends on taxicabs having compatible dispatch systems using digital communication with geographic positioning capability.

There are numerous examples of cities, rather than transit agencies, that offer taxi discounts. The number of public entities that subsidize taxi rides is not known, but it is probably in the hundreds. An Internet search using terms like "taxi coupon" or "taxi scrip" produces many pages of results for programs run by cities all over the U.S. One large taxi company in the Chicago area lists on its website over 30 municipal taxi subsidy programs for seniors in the Chicago area in which the company participates.

**Applicability:** This concept may be appropriate for a public entity if there is good quality taxi service available in a given area, especially if there is accessible taxi service. Some operators have had mixed experiences working with taxi companies in their areas. Issues that can occur include unreliable service, long response times, trip refusals, inappropriate driver behavior, poor vehicle condition, and fraudulent claims for reimbursement. Based on comments received from the operators, the principal opportunities for new or expanded taxi trip subsidy programs would be in Marin and Santa Clara counties. Marin Transit is already planning to implement a taxi subsidy program for seniors using its vehicle registration fee funding.

**Costs:** A taxi subsidy program requires a continuing commitment for funding, although the amount can be controlled by adjusting the subsidy level and the number of trips that each participant can take. There is also a continuing cost for administration. This can involve staff

<sup>41</sup> In the 1970's, for example, experience with many then-new taxi user-side subsidy programs around the country found a number of programs with unauthorized use, and some in the industry referred to an unofficial "rule of thumb" suggesting that up to 20% of such program use was not valid.

<sup>42</sup> MTC Transactions, Fall 2010, at [http://www.mtc.ca.gov/news/transactions/ta\\_fall\\_2010/mclean.htm](http://www.mtc.ca.gov/news/transactions/ta_fall_2010/mclean.htm).

time to take reservations, as Denver RTD does to control and monitor usage, or costs for a third party administrator and/or taxi card clearinghouse as is done in Los Angeles and Baltimore. Vouchers and tickets also involve costs, but these mechanisms are not recommended. There may also be a need to help taxi operators with the purchase of accessible taxicabs. This is not legally required but may be viewed as necessary to establish equity for wheelchair users.

**Benefits:** Taxi subsidy programs create added mobility for the community, providing same-day, exclusive ride service that is not available from ADA paratransit. There is little hard evidence about whether taxi subsidies substantially reduce demand for ADA paratransit, and opinion on the subject is mixed. The manager of the ADA paratransit program in Baltimore, Maryland does not see any reduction in ADA paratransit demand from their very generous program which allows two rides per day for which the rider pays \$3 for a full fare value of up to \$20. By comparison, San Francisco MTA believes that its more controlled program saves money. With some exceptions, a San Francisco Paratransit rider must first establish a ride history on the traditional next-day ADA service, and, after establishing that history, is then offered the use of the supplemental taxi service. Those riders determined eligible for the taxi service are provided a monthly dollar allotment to purchase taxi trips based on their trip needs. Riders pay \$5.00 per \$30.00 worth of taxi service.

**Barriers:** Barriers include lack of good quality taxi service and inconsistent regulation among multiple jurisdictions. Use of differing dispatch systems by taxi companies can make it hard to implement a taxi card system. Limitations on picking up in neighboring jurisdictions may be a concern for this strategy, but it is not as significant a barrier as it is for paratransit systems that directly assign trips to taxicabs (see discussion later).

**Conclusion:** Transit operators should be encouraged to implement taxi trip subsidy programs with necessary controls on usage where local conditions are appropriate and as allowed by funding, or to help cities implement such programs where they do not already exist.

## **Productivity Measures**

### **Controlling No-Shows and Late Cancellations**

**Concept:** Reducing the rate of no-shows and late cancellations reduces wasted vehicle time and increases vehicle productivity. Steps to reduce no-shows and late cancellations include rider education, reminder calls to riders, suspensions of riders with a pattern of excessive no-shows, and rider incentives.

**Current Status:** Bay Area operators have been taking steps to control no-shows and late cancellations for many years. Operators indicate that their no-show and late cancellation rates are already low.

**Applicability:** Steps to control no-shows and late cancellations are always applicable in an ADA paratransit system. However, it is not clear that there are systems where additional steps are needed aside from continuing education of riders.

**Costs:** An active no-show program requires staffing to monitor and confirm no-shows, send out notices, and administer appeals. However, these costs are already being borne by Bay Area operators. Further rider education efforts could add some additional staff time to make presentations and/or costs for public information materials and mailing.

**Benefits:** Three operators reported the potential for “small” savings, mainly from rider education. The largest of these operators, SamTrans, already has a no-show rate of 1.9% of scheduled trips and a late cancellation rate of 1.7% of scheduled trips. An optimistic estimate would be that the

combined rate might be reduced by 1%, which would probably produce an operating cost savings of under 1%.

**Conclusion:** Transit operators should be encouraged to maintain and enhance programs to control no-shows and late cancellations as needed based on local circumstances.

## Changes to Operating Policies

**Concept:** Adjusting policies such as the on-time window for passenger pick-ups and the number of days in advance that reservations are accepted can make it possible to create more productive schedules or reduce incidence of cancellations and no-shows. Allowing longer travel times can also increase productivity.

**Current Status:** Several operators increased their on-time windows, so that most now have 30-minute windows. All operators have reduced their advance reservations windows from the 14 days that were originally required under ADA and later made optional. About half take reservations one to seven days in advance and the other take reservations between one and two or three days in advance. East Bay Paratransit tried a three-day reservations period and went back to seven days because the expected reduction in cancellations and the already reasonable no-show rate did not occur, while hold times for reservations increased. SamTrans and VTA have already changed their travel time policies to allow for longer travel times for some trips, while remaining comparable to fixed-route travel times.

**Experience in Other Areas:** TCRP research<sup>43</sup> identified four paratransit systems that quantified the results of shortening their reservation window. The data showed significant declines in cancellations, which decreased the burden on call-takers and reservationists. But the system managers also believed that the shorter window decreased no-shows as well, since riders are less likely to forget their reservation with less time between booking the trip and the day of the trip (though there was little data to support that). One of the identified paratransit systems decreased its window from the original 14 days to seven, but still had high rates of cancellations. An analysis of cancel patterns found that those riders calling five to seven days out were more likely to cancel trips, so the system shortened the reservation window again, this time to three days.

**Applicability:** Most operators could shorten their advance reservation periods, but operators interviewed for this project already have low no-show rates, so the benefits of shorter advance reservations periods may not be great. Many operators could probably allow longer travel times and still be in compliance with ADA regulations. A longer on-time window would place operators beyond the range that is considered acceptable by most operators. Most of these changes would probably be opposed by the community.

**Costs:** The only significant cost of changing operating policies would be the cost of conducting public process and rider education.

**Benefits:** Past changes have enabled some operators to improve productivity. For the future, some operators are skeptical of benefits from further shortening the advance reservations period, and there is no remaining benefit available from changing on-time windows. Allowing longer travel times may help a few operators who have room to make such a change. When SamTrans and VTA changed their travel time policies, it helped improve productivity; for VTA it also helped establish a distinction between ADA paratransit and the type of service needed by some human service agencies which have their own requirements for shorter travel times than allowed by ADA.

**Conclusion:** Operators should make changes as appropriate based on local circumstances.

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<sup>43</sup> TCRP Report 124.

## Paratransit Technology

**Concept:** Using automated scheduling software, Automatic Vehicle Location (AVL), Mobility Data Terminals (MTDs), and Interactive Voice Response (IVR) telephone systems to improve technology.

**Current Status:** Most operators have used automated scheduling software for many years, and the larger operators either already have or are in the process of implementing AVL/MDTs and several also have IVR. There are limited opportunities for further action, aside from IVR and more effective use of existing AVL/MDT capability which is discussed further under “Separating the Control Center from Vehicle Operations.”

**Experience in Other Areas:** TCRP research surveyed transit systems about the benefits of technology and most did not cite productivity improvements as among the benefits. However, King County Metro believes that use of MDTs did enable it to improve its productivity. Managers there believe a productivity gain from 1.66 in 2004 to 1.74 passengers per revenue hour in 2005 can be attributed in great part to MDT/AVL technology.<sup>44</sup> At the same time, however, Metro applied other measures including daily adjustments of scheduled vehicle hours. Metro’s service structure may also contribute to its ability to gain productivity improvements from technology, since scheduling and dispatch are in the hands of a “control center” contractor rather than vehicle operations contractors whose compensation is based on vehicle hours operated.

**Applicability:** Aside from IVR there are few remaining opportunities, though some small operators might benefit from use of AVL/MDTs.

**Costs:** The cost of an IVR system depends on the size of the system.

**Benefits:** AVL/MDTs can help avoid missed trips and verify no-shows. AVL/MDTs, in principle, can allow dispatchers to achieve better control over vehicles in order to optimize productivity and on-time performance during the day. However, as long as one contractor controls both dispatching and vehicle operation, then there is limited incentive for the contractor to optimize productivity, except where the contractor is paid by the trip, in which case there is also no immediate benefit to the transit agency. In a TCRP research project that addressed this issue, the only transit system that recorded a significant productivity benefit from implementing AVL/MDTs used the technology to enable a control center contractor to perform dispatching for vehicle operations contractors that had previously done their own dispatching.<sup>45</sup>

IVR can allow riders to confirm and cancel rides conveniently at any time of day, which is convenient and desirable for productivity as well, and may save a small amount of staff time. IVR is popular with some riders for its ability to place an automated call when a vehicle is arriving, but some operators find that this feature encourages some riders to wait for the call which could then reduce passenger readiness. No clear productivity benefits of IVR have been documented.

**Conclusion:** Operators should continue with plans for implementing IVR and to make full use of AVL/MDTs. (See also further discussion under “Separating the Control Center from Vehicle Operations.”)

## Manage Supply of Revenue Hours to Match Demand

**Concept:** A better match between ridership patterns and the revenue hours that are deployed can reduce ADA paratransit operating costs by reducing excess vehicle time that cannot be productively used by any rearrangement of passenger trips. Methods used include varying vehicle deployments from day to day based on projected demand, optimizing driver schedules,

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<sup>44</sup> TCRP Report 124.

<sup>45</sup> TCRP Report 124.



modifying driver schedules on a daily basis based on actual demand, and using taxicabs to carry trips that prevent creation of an efficient set of driver schedules.

**Current Status:** Most operators report that they are already managing the supply of revenue hours to match demand. Several noted barriers, as described below. San Francisco pays by the trip, in which case better management of revenue hours would only benefit providers in the short run, though it could allow lower bids in the future.

**Experience in Other Areas:** TCRP research identified several larger transit systems that specifically noted that management of their contractors' revenue hours is a strategy for reducing operating costs as well as improving productivity.<sup>46</sup> One large West Coast agency pursued this strategy very aggressively with its contractor, "flexing" the start and end time of driver shifts to better match the next day's trips and helping the agency achieve a productivity of 2.34 passenger-trips per revenue vehicle hour, considered high for a large urban ADA-paratransit-only service. However, the strategy was later modified, with flexing limited to 30 to 60 minutes from the original schedules, which lessened the effect and productivity declined slightly to 2.26. A recent analysis by a team led by Nelson\Nygaard identified available productivity savings of about 6% by optimizing driver schedules for ADA paratransit service in Chicago.

**Applicability:** A transit agency's ability to manage vehicle hours is greater when the scheduling function is separated from the vehicle operations function, as is the case at East Bay Paratransit and VTA, than where a single contractor handles both functions. In the latter case, the contractor has limited incentive to manage vehicles hours, although the transit agency can push for efficiency through incentives and independent analysis of schedules.

**Costs:** Some expenditure of staff time or consulting assistance may be needed to optimize schedules using methods that go beyond those already in use. There may also be a purchase of software needed.

**Benefits:** Depending on labor agreements, prior work to optimize schedules, and availability of reliable taxi service, available productivity improvement could range from zero to more than 10%. For savings around 1%, the amount saved would justify the expense of optimizing schedules only for larger operators, but if savings exceed 3% then the amount saved would justify expenses for all operators. However, most operators believe that they have already achieved the available savings.

**Barriers:** The most commonly used software for paratransit scheduling does not include a tool that optimizes vehicle and driver schedules to match demand, although the supplier has just announced such a tool for limited beta testing and at least one independent supplier also offers such a product. However, some operators report good results using a trial and error process for optimizing schedules. A strategy of optimizing driver and vehicle schedules must be implemented judiciously, balancing the objective of more cost effective service with the realities of driver scheduling, labor agreements, and ability to recruit and retain a stable driver workforce. Numerous split shifts, part-time shifts, and variable shifts (all of which can be used to match supply to demand) can make it harder to recruit and retain qualified drivers. Moreover, the extent of service hour adjustments must be made clear in bidding situations, since private contractors enter into agreements based on an understanding of the service they will provide and for a cost that depends on that understanding. Lastly, where a single contractor is responsible for scheduling and vehicle operations, the transit agency may have limited ability to ensure that optimal schedules are in use.

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<sup>46</sup> TCRP Report 124.

**Conclusions:** Larger operators that pay contractors by the hour may benefit from optimizing schedules to improve the match between supply and demand, but few operators perceive available benefits beyond those already achieved.

## **Effective Use of Taxis and Other Non-Dedicated Vehicles**

**Concept:** The transit agency or broker contracts with one or more taxi companies and the paratransit provider or broker assigns certain trips to these taxi providers with the objective of maximizing efficiency.

**Current Status:** A few operators contract with taxicabs, including VTA (through its broker, Outreach) and SamTrans. LAVTA has just awarded a contract with a company that will provide all of the agency's paratransit service using independent contractor drivers and community agencies. Many of the vehicles will be non-dedicated, potentially including taxicabs. Marin Transit has made limited use of taxis and has had to subsidize insurance premiums for the companies.

**Experience in Other Areas:** A review for TCRP<sup>47</sup> found that transit agencies in small urban areas tend to make the most use of non-dedicated vehicles for their paratransit services. The researchers' survey found that 60% of the transit agencies in smaller city settings use non-dedicated service for at least half of their passenger trips. By contrast, transit agencies in suburban and rural areas used non-dedicated service much less frequently, for less than 15% of their trips. Transit agencies in large cities showed more variation, with 15 to 50% of trips provided through non-dedicated service. In each case, the most common non-dedicated service was taxis. The research also documented the cost differences, finding that non-dedicated vehicle operations have significantly lower costs per passenger trip than do dedicated services: \$14 to \$16 per trip versus \$23 to \$24 per trip, thus offering transit agencies the potential for cost savings.

Importantly, experience in the industry has proved that effective use of taxis requires the existence of a viable local taxi industry that is willing and able to meet requirements for serving publicly-sponsored paratransit trips. Depending on the structure for scheduling the taxi trips, this will mean, among other requirements, that the taxi drivers comply with FTA drug and alcohol testing. The growing trend of taxi companies, at least in urban areas, to acquire wheelchair accessible taxis, sometimes required by taxi licensing entities and facilitated with availability of capital funds through the federal New Freedom program, has increased the role that taxis can play in providing paratransit service for transit agencies.

As a variation of using taxis as non-dedicated providers, the transit agency in Reno, NV uses taxis as dedicated service to provide its required ADA paratransit service during lower demand nighttime hours, from 8:00 PM to 6:00 AM, rather than have its contract provider operate dedicated service during that time. One local taxi company, whose fleet includes ramp-equipped mini-vans, has provided this service for a number of years, resulting in cost savings to the transit agency with the taxi company's lower cost structure. Houston METRO also makes extensive use of a taxi company for dedicated vehicle service.

**Applicability:** This strategy is feasible only where there is an adequate supply of qualified taxicab operators that can provide consistent service and meet requirements such as insurance, drug testing, and driver training. These conditions apply mainly in urban areas. Assigning trips to taxis saves cost mainly by reducing the need for low productivity hours of dedicated vehicles service. As a result, where the transit agency pays per trip, as in San Francisco, this strategy

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<sup>47</sup> TCRP Report 121, Toolkit for Integrating Non-Dedicated Vehicles in Paratransit Service, by Nelson\Nygaard Consulting Associates et al., Transportation Research Board, 2007.

may have limited applicability. Availability of accessible taxicabs also helps facilitate scheduling trips on taxicabs.

**Cost:** Using taxicabs requires additional effort in the scheduling process to determine which trips should be assigned to taxicabs, additional procurement activities, and effort to train drivers, monitor service, verify compliance with federal drug and alcohol testing, and troubleshoot service issues.

**Benefits:** If taxicabs are used only to handle a small number of trips that do not fit onto vehicle runs, they can reduce the need to schedule extra drivers and vehicles just in case there is unexpected demand on a given day. If qualified operators are available in sufficient quantity, they can be used to create more efficient dedicated vehicle schedules. For example, a recent analysis for the ADA paratransit operator in Chicago showed that assigning about 12% of trips to taxicabs would reduce operating cost by about 6%<sup>48</sup>. In a system where there are numerous group trips, opportunities to make effective use of taxicabs may be more limited, since taxis provide a ride to a single person and may not present any cost savings in situations where paratransit rides can be loaded with multiple passengers. Where there is a taxi operator that has accessible vehicles, the taxi operator may be able to serve all or most trips at night or on weekends, as currently done by SamTrans; the cost savings of this arrangement have not been determined.

LAVTA's planned change of operating model is projected to reduce operating cost by 24%, but most of this savings appears to stem from use of independent contractors, not necessarily operating non-dedicated vehicles. LAVTA's experience will be of great interest, including the actual extent of savings and how well the independent contractor model works.

**Barriers:** Where taxi service is limited or lacking, where companies do not have the resources to meet insurance requirements, or where conditions result in companies that provide inconsistent service, taxis may not be a realistic option for providing ADA paratransit. If a transit operator's service area includes multiple cities, which is the case for most Bay Area systems, then regulations that prohibit taxis from picking up in neighboring jurisdictions can make it very difficult to make efficient use of taxicabs and limit the attractiveness of paratransit trips for taxi drivers. This limitation has been overcome in Santa Clara County through modification of city ordinances to allow taxis serving paratransit riders to pick up even without being licensed in a given city. The fact that few taxi companies operate wheelchair accessible vehicles does not prevent using taxis for other trips, but does make it more complicated to schedule trips onto taxicabs and does limit the portion of trips that can be served with taxicabs.

**Conclusion:** Without changes to taxicab ordinances and other steps to enhance taxi service, including more widespread adoption of accessible vehicles, there are few opportunities to significantly expand use of taxicabs.

## Vehicle Sharing

**Concept:** The ADA paratransit provider purchases seats or time for ADA riders on vehicles operated by community-based human service agencies at significantly lower cost than serving those riders on the dedicated ADA paratransit fleet.

**Current Status:** Only Outreach, VTA's contracted broker, is known to have implemented this strategy in the Bay Area. The broker purchases seats or time for VTA's ADA riders on vehicles operated by other community-based human service agencies. One such arrangement involves the local Regional Center. The broker purchases about 7,000 to 8,000 one-way trips per month on the Regional Center's transportation service for ADA riders who are traveling to the same

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<sup>48</sup> Based on work currently underway by the consulting team for Pace Suburban Bus, which is responsible for ADA paratransit service in the entire Chicago region.

Regional Center program served by the Regional Center's vans. This eliminates the need to schedule those trips on the broker's ADA service operators and provides cost savings: the net cost, after fares, for an ADA passenger trip through this vehicle sharing is less than \$5.00, far less than the net cost for an ADA passenger trip at \$24.

In a related arrangement, the broker purchases use of a Sec. 5310-acquired van operated by a senior center for its adult day care program. The broker uses the van for 2½ hours per day when it would otherwise be idle. This arrangement serves about 300 ADA passenger trips per month, with a net cost per ADA passenger trip similar to the vehicle sharing arrangement, at somewhat less than \$5.00.

**Applicability:** It appears that this strategy is facilitated by Outreach's status as a non-profit agency and Consolidated Transportation Services Agency (CTSA). Currently, Marin Transit is the only other large transit agency that contracts with a non-profit agency for ADA paratransit, in an arrangement that also provides paratransit service for Golden Gate Transit. Among rural operators, Sonoma County Transit also contracts with a non-profit provider.

**Conclusion:** This strategy work best when service is provided by a non-profit agency.

## Vehicle Mix

**Concept:** Optimizing the mix of vehicles types, including sedans where appropriate, reduces vehicle operating cost and may improve productivity.

**Current Status:** All operators experiment with their vehicle mix and see few opportunities for improvement. VTA has had success with a high percentage of sedans, including fuel-efficient hybrids. Currently 41% of its ADA paratransit vehicles are Toyota Prius hybrid sedans. These sedans are effective in serving VTA's ambulatory riders, which constitute the majority of the agency's ADA paratransit clientele, and can also serve ADA riders using certain mobility devices. Dwell times are less with the sedans and, despite perceptions that the vehicles may be less productive than more traditional paratransit vans, the Prius can fit several riders at the same time and the hatch back allows for the loading of walkers and manual wheelchairs, so these smaller vehicles have proved effective and versatile. Among its other advantages, the Prius is very cost effective for maintenance and fuel, costing about 75% less per mile for these two items than a more standard cutaway van based on data provided by VTA:

- Prius – 11 cents/mile for maintenance and fuel (5 c/mi for maintenance, 6 c/mi for fuel),
- Cutaway paratransit van – 43 cents/mile for maintenance and fuel (13 c/mi for maintenance, about 30 c/mi for fuel)

EBP has taken a different path with its vehicle fleet, gravitating to an increased use of paratransit vans, which the agency finds provide more productive service when compared to smaller, non-accessible sedans. Previously the fleet was 50% vans and 50% sedans, which then changed to 60% vans and 40% sedans. More recently, the agency has moved to 70% vans and 30% sedans. The increased availability of the accessible vans has been particularly effective given a recent surge in demand from human service agencies, with opportunities for increased group trips to those agency sites. Towards this end, the transit agency has focused efforts to increase its many-to-one group trips and the larger capacity vans have helped in efforts to increase productivity.

**Applicability:** Any operator can benefit from optimizing its vehicle mix, but none see opportunities for greatly increasing their use of sedans taking into account the need to serve large numbers of group trips and trips by wheelchair users who cannot transfer.

**Conclusion:** Each operator will need to determine if there are opportunities to save by modifying its mix of vehicles.

## Alternative and Hybrid Services

**Concept:** In some areas, it is more cost effective to serve all of the public, including people with disabilities, with a single service, such as general public dial-a-ride or flex-route (route deviation) service, rather than with separate fixed-route and ADA paratransit services.

**Current Status:** Marin Transit provides route deviation service in the rural West Marin area and dial-a-ride service in Novato. SamTrans operates a small scale demand-responsive service in a low-income neighborhood. AC Transit and VTA have experimented with demand-responsive services in the past but found they did not meet expectations.

**Experience in Other Areas:** General public dial-a-ride (DAR) has been used by some transit agencies to improve the performance of ADA paratransit service. Specifically, transit agencies have integrated their DAR services with ADA paratransit, particularly in low-density areas, improving the efficiency and cost-effectiveness of the services by sharing vehicles and increasing overall ridership productivity.<sup>49</sup> Cost-savings accrue as the transit agency reduces total service hours operated, no longer operating separate fixed-route and ADA paratransit services.

Route deviation or “flex route” service may be another option. The Potomac and Rappahannock Transportation Commission (PRTC) in Prince William County, VA, a suburban county in the greater Washington, DC metropolitan area, provides local and commuter service. All of its local service is route deviation, which means the transit agency provides just one local service rather than separate fixed-route and ADA paratransit service. Total operating cost per passenger trip on the route deviation service is \$8.67, somewhat more than per trip costs for productive suburban fixed-route service. This is more than made up by the fact that PRTC does not have to operate ADA paratransit service at all.

**Applicability:** Alternatives to fixed-route service work best in low-density areas and in locations on the fringe of urban areas that are still developing where it is still not cost-effective to operate fixed-route service.

**Cost:** Alternative service may cost less per vehicle hour than fixed-route service due to use of contractors and smaller vehicles.

**Benefits:** The principal benefit of operating alternative service is avoiding the cost of operating separate ADA paratransit entirely. Since the likely applications for these services are on the fringes of the urban area, transit operators can avoid expanding the ADA paratransit service area. However, the impact on the overall cost of ADA paratransit is likely to be small.

**Barriers:** Alternative services require expertise in demand-responsive operations, which is lacking in most transit operators.

**Conclusion:** Transit operators should consider contracted alternative services where they have under-performing routes on the fringes of the service area, such that the ADA paratransit service would be reduced, or in place of new fixed-route service on the fringes of their service area.

## Cost Containment Strategies

### Use of Volunteer Drivers

**Concept:** Volunteers drive paratransit vehicles in place of paid drivers. Volunteers can also perform administrative tasks.

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<sup>49</sup> TCRP Report 124.

**Current Status:** Only the Volunteer Center, the contract provider for Sonoma County Transit, is known to use volunteer drivers for ADA paratransit in the Bay Area. (Volunteers are also used to support administrative work in the office.) The service contractor, the Volunteer Center of Sonoma County, schedules volunteer drivers to help meet demand during the peak and other time periods. This practice eliminates the need to have a full-time paid driver shift to cover only a few hours, with cost savings to the transit agency. The operator's volunteers are provided basic training, are required to attend periodic safety meetings, and use sedans provided by the contractor. Almost all of the volunteers have a four-hour shift, supplementing the full-time paid drivers, who are all full-time but one. On the busiest service days of Wednesdays and Thursdays, the contractor deploys 18 paid drivers (17 full-time and one part-time) and seven volunteers. If full-time paid drivers were used on Thursdays instead of the part-time volunteers, 196 total paid driver hours would be required. With use of the part-time volunteers, however, Thursdays require 140 paid driver hours, with an additional 28 hours provided by the part-time volunteers.

**Applicability:** Volunteer drivers appear to be used successfully only in rural and small-town settings, especially where there is a non-profit provider.

**Cost:** Having volunteers drive paratransit vehicles requires effort to recruit and motivate volunteers and to provide training, monitoring, insurance, and drug testing, just as with paid drivers.

**Benefits:** The wages that would otherwise be paid for a paratransit driver are saved. The cost savings may be substantial if a short volunteer shift avoids a longer paid driver shift, or for some long distance trips. The Volunteer Center reduces its use of paid drivers by 29% on some days by using volunteers.

**Barriers:** In an urban setting, and where service is operated by a for-profit provider, it may be very difficult to recruit volunteers who will commit to a fixed schedule with required training and drug testing.

**Conclusion:** There do not appear to be any further applications in the Bay Area for volunteer drivers on ADA paratransit vehicles, except possibly in rural areas that were not examined in this study. However, volunteers may be able to serve as escorts and to provide travel training. Volunteers can also be effective in non-ADA supplemental programs, typically operated by non-profit agencies, as discussed in a separate section.

## **Capitalizing Facilities and Vehicles**

**Concept:** Using capital funds to purchase vehicles or an operating facility instead of having contract providers provide these reduces the operating cost of paratransit service. Under the Federal Transit Administration's capital cost of contracting policy, capital funds can also be applied to a percentage of the portion of contract costs that represent vehicle depreciation.

**Current Status:** Most Bay Area operators purchase paratransit vehicles using capital funds, and some provide an operating facility as well. Santa Clara VTA purchased vehicles needed for the ADA paratransit service for the first time in 2007, which reduced the costs of the private contractors that provide dedicated service and provided cost savings to the transit agency. It also made it possible for the broker to purchase fuel for the contract operators, saving costs with bulk purchase and reduced taxes. One large transit agency where private operators provide a large number of vehicles is SFMTA.

**Applicability:** Any transit operator can capitalize facilities and vehicles, but there will only be cost savings if there are available capital funds that are not already needed for other purposes.

**Benefits:** When private contractors supply vehicles, they pass along not only the cost of vehicles but typically financing costs and an administrative mark-up, which increases their hourly rates. Without capital costs, their rates will be less. Depending on the type of vehicle and its expected operating life, removing vehicle purchase cost from the contracted operating cost could save from \$4 to \$8 per vehicle hour. In the case where the capital cost of contracting policy is applied, only a part of the vehicle depreciation is eligible for 80% Federal funding. For example, if a turnkey contractor provides a vehicle that it operates and maintains, only 50% of the depreciation is eligible.<sup>50</sup> Savings from purchasing a facility, or accommodating paratransit vehicles at an existing transit agency facility will vary greatly and depend on the agency's cost to maintain the facility. If labor agreements require use of transit agency staff, there could be no savings.

**Barriers:** Aside from considerations relating to the use of transit agency facilities noted above, lack of available capital funds not needed for other purposes is the main barrier to capitalizing facilities and vehicles. Each transit agency needs to optimize its use of capital funding overall, taking into account fixed-route and paratransit services.

**Conclusion:** MTC could explore possibilities for expanded application of capital funds to ADA paratransit.

## Internal Cost Cutting

**Concept:** Depending on circumstances, costs may be reduced, at least temporarily, through wage freezes, staffing reductions, contract renegotiation, and making arrangements with other agencies for tax-free fuel, free parking, and low-cost maintenance services.

**Current Status:** Most operators report a variety of cost-containment strategies applied in recent years.

**Applicability:** Opportunities for cost cutting will depend on local circumstances, including contract provisions and terms and cost cutting steps already taken.

**Barriers:** Existing contract provisions and labor agreements may limit opportunities for cost cutting. In addition, the effect of cuts on service quality need to be considered. San Francisco MTA noted that cost cutting has had an impact on employee retention and administrative capability.

**Conclusion:** Operators will need to determine specific cost cutting opportunities based on their particular local circumstances.

## Restructuring Service

### Separating a Control Center from Vehicle Operations

**Concept:** One entity performs reservations, scheduling and dispatching ("control center" operations), while other entities, often including taxicabs, operate vehicles. The control center can make an optimal assignment of trips to operating entities, including taxis and other non-dedicated vehicles, and optimize the scheduling of vehicles and drivers without conflicting incentives that can exist when a single provider is responsible for all functions. A control center is particularly effective combined with use of automated dispatching tools (AVL and MDTs).

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<sup>50</sup> See FTA's "Frequently Asked Questions: Third Party Procurement, Capital Cost of Contracting" at [http://www.fta.dot.gov/funding/thirdpartyprocurement/faq/grants\\_financing\\_9252.html](http://www.fta.dot.gov/funding/thirdpartyprocurement/faq/grants_financing_9252.html).

**Current Status:** In the Bay Area, only VTA and EBP use this operating model. In the case of EBP, the broker does not yet dispatch vehicles but EBP is considering adding this function to the broker's responsibilities to take advantage of recently acquired MTDs.

**Experience in Other Areas:** King County Metro and Portland TriMet both contract with control center contractors, with responsibility for reservations, scheduling and dispatching, and separately for vehicle operations. In the Chicago area, Pace has implemented a control center structure for its paratransit service in two suburban counties and increased its ability to use taxis in that area.

**Applicability:** A control center model is most applicable in large service areas where it makes sense to have multiple vehicle operations contractors, and where lack of a control center would require an inefficient zone-based system. In the Bay Area, the clear candidates for a control center model are the two agencies already using it. Control centers could be used in other areas if there were also consolidation of operations, for example in the case of ECCTA, CCCTA, and LAVTA and possibly for multiple North Bay operators.

**Cost:** A control center involves some staffing inefficiency since there will typically be some dispatching staff located both at the control center and at operating bases. There is also some inefficiency in administrative staffing, as both the control center contractor and operations contractor will have management and administrative staff. If vehicles do not yet all have MDTs, these would need to be acquired and installed. However, since control center functions account for at most 10% to 15% of the cost of paratransit operations, a small amount of duplication would add only 2% or so to the total cost.

**Benefits:** This method of operation has helped King County Metro apply its strategy of continuously managing vehicle hours to match daily demand, and has also helped it use MDTs with AVL to optimize productivity, achieving a 15% improvement in productivity between 2001 and 2005.<sup>51</sup> The control center also allowed King County to move away from an inefficient system of operators serving separate zones. Compared to multiple turnkey contractors, a control center allows for economies of scale in taking reservations. The remaining benefits for the one applicable case in the Bay Area, EBP, would be much less than achieved by King County, since EBP's broker already takes reservations for all providers and schedules all vehicles for multiple providers with no service zones.

**Barriers:** Aside from the limits of applicability noted before, there are no obvious barriers.

**Conclusion:** EBP may have the potential to increase productivity by several percent by fully implementing the control center model by adding dispatching to its broker's operations. Control centers could also be in conjunction with consolidation of operations, for example in the case of ECCTA, CCCTA, and LAVTA and possibly for multiple North Bay operators.

## **Consolidated Administration or Operations**

**Concept:** A single entity provides or oversees all paratransit service in an area served by multiple fixed-route transit systems.

**Current Status:** In the Bay Area, BART and AC Transit formed the East Bay Paratransit Consortium to operate ADA paratransit service where the two systems overlap. The two agencies share responsibilities and contract for program management and for a broker to operate service through multiple subcontractors. A formula was negotiated for sharing the cost of the service.

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<sup>51</sup> Information provided by King County Metro for work currently underway by the consulting team.



BART also has cost-sharing agreements with other transit systems where the regional rail service overlaps those local operators. Most notably, BART reimburses SFMTA for a portion of San Francisco's paratransit cost corresponding to trips within San Francisco that, if made using fixed-route transit, would use BART. There are also cost-sharing agreements between SFMTA and both EBP and Golden Gate Transit. EBP provides service to anywhere in San Francisco with financial participation by SFMTA. Whistlestop Wheels provides some trips beyond the strict ADA required areas corresponding to Golden Gate Transit fixed-route service in San Francisco and Sonoma County under similar arrangements.

**Experience in Other Areas:** In Los Angeles, Access Services Inc. (ASI) was created for the purpose of operating ADA paratransit service on behalf of most of the numerous transit operators in Los Angeles County. Currently ASI provides service, known as Access Paratransit, on behalf of 45 fixed-route operators. It also serves as Consolidated Transportation Services Agency (CTSA) for the county. Some of the operators provide fixed-route services that overlap so that providing separate paratransit services would be very inefficient. Several of ASI's member municipal transit agencies also operate their own local paratransit systems. Examples include Long Beach, Norwalk, and Montebello. Also, ASI's paratransit operations for the two outlying operators, Antelope Transit and Santa Clarita Transit, are functionally distinct from the rest of ASI services. However, ASI's largest members, Metro and Foothill Transit, rely entirely on ASI for ADA paratransit services.

ASI contracts for service in six regions within Los Angeles County, including four in the central part of the county, and two in the more remote areas of Santa Clarita and Antelope Valley. In each region, a contract provider is responsible for reservations, scheduling, dispatching, and vehicle operations. Each provider carries only trips originating within its assigned area. If a rider books a trip that goes beyond a provider's area, the provider will provide that trip, but the rider needs to call the provider serving the other area for the return trip except within a defined buffer area.

ASI provides a common technology infrastructure used by all of the providers. This gives it the ability to obtain reports in a standard format and gives it the ability to determine the status of any current or recent trip for purposes of complaint investigation. ASI also provides many of the vehicles used in the service, receives and investigates complaints for the whole region, conducts all paratransit planning activities for the region, and contracts for ADA paratransit eligibility screening for the region. It also operates an Operations Monitoring Center that customers can call when a vehicle doesn't show. The OMC can intercede with the providers or arrange for transport with a pool of backup providers.

ASI's cost per trip (including attendants and companions) was \$32.81 for 2009-10 including the cost eligibility, agency overhead, fuel, and many vehicles. This cost per trip is the middle of the range for large Bay Area systems. Considering the size of the area served, and the fact that ASI's zonal service structure creates a lot of inefficient deadhead, this cost per trip is quite reasonable but not necessarily less than the cost per trip for smaller systems that would have shorter trip lengths.

In Chicago, Pace, the suburban transit operator, administers ADA paratransit for itself and for the Chicago Transit Authority. However, operations are kept separate. Because of major service improvements undertaken by Pace for the Chicago service, it is not possible to compare cost before and after the consolidation. In the suburbs there are no other fixed-route systems, but many municipalities have local, non-ADA, dial-a-ride systems. Some of these operate independently of Pace, but many of them are operated by Pace on the municipalities' behalf. Pace contracts for paratransit operations in each of seven suburban sub-areas. In each sub-area, all trip requests for ADA paratransit and for the participating local dial-a-ride services come to the single Pace contract operator. The operator applies each municipality's policies with

respect to eligibility, fares, and service area and operates the services, sometimes sharing trips on the same vehicles and sometimes using vehicles dedicated to each service depending on the agreement with each municipality.

In the Washington, DC area, the Washington Metropolitan Area Transit Authority (WMATA) operates paratransit service that also meets ADA requirements for several suburban transit systems. These systems are entirely within WMATA's service area but many of them operate local bus service that goes well beyond the reach of WMATA's rail and bus service. As in Los Angeles, some of the local operators have their own paratransit services that serve many local trips, but these local services do not necessarily comply with ADA requirements for service hours, no capacity constraints, etc. WMATA's MetroAccess paratransit provides transfer-free rides throughout an enormous service area, covering the District of Columbia, suburban Maryland, and suburban Virginia. WMATA is supported by contributions by all the member jurisdictions, so it is in the local jurisdictions' interest to provide some portion of paratransit on their own to reduce what they have to pay to WMATA, while leaving it to WMATA to ensure ADA compliance and provide longer trips.

**Applicability:** In theory there could be a few opportunities to consolidate paratransit services, for example among ECCCTA, CCCTA, and LAVTA, between VTA and SamTrans, or between Sonoma County Transit and Santa Rosa. However, there are significant barriers to such consolidation. The circumstances are quite different from those in Los Angeles, Chicago, or the Washington, DC. In each of those areas there is a small number of dominant operators covering the entire region and very extensive supplemental services provided by municipalities. By comparison, each operator in the Bay Area has a defined geographic area with little overlap and there are fewer supplemental municipal services. The only situation that is comparable to the other areas is BART and AC Transit which have operated a consolidated ADA paratransit service from the beginning.

**Cost:** Although a consolidated system should theoretically be more efficient than a separate system, it could trigger costs for a much higher level of demand if trips were provided throughout the consolidated service area without transfers.

**Benefits:** A consolidated operation should save costs by consolidating administrative functions, reservations, scheduling, and dispatching, thereby creating a control center service model. Assuming that multiple operating bases would need to be retained, there would be some overlap between functions in the control center and functions at the operating bases, but these would be minor compared to potential operational savings. Consolidated service could be more convenient for riders, but only if transfers were eliminated or at least made more convenient by allowing a transfer to be booked with one phone call and coordinating the transfer from a single dispatch center. As already noted, transfer-free service would trigger more demand, potentially wiping out any cost savings, but more convenient transfers would have a smaller impact.

**Barriers:** Barriers to service consolidation include differing service policies and issues related to loss of local control. In principle, a consolidated operation could administer different policies in two areas, for example, different fares or advance reservations periods. However, there would also be concerns about the ability to control costs and service quality and to respond to the local community. The cooperating operators would also need to agree on an equitable way to share costs.

**Conclusion:** Because of the scale of potential savings, consolidation deserves serious consideration. The local operators would need to consider the details of each situation.

## **Alternatives to ADA Paratransit**

### **Enhancements to Fixed-Route Transit Service**

A recent report for the American Public Transportation Association<sup>52</sup> identified a number of ways that public transit can improve its attractiveness to older people, many of which apply to younger people with disabilities as well. These enhancements include additional bus operator training, incorporating travel needs of older people and people with disabilities in route planning and stop placement, and application of universal design strategies at transit facilities, bus stops, and on streets and sidewalks in the immediate vicinity of transit facilities and stops.

Other useful actions are already required by ADA, but operators can take steps to ensure that they are implemented in the most thorough way possible. These include consistent stop announcements and enhancements to public transportation vehicles such as low-floor buses, kneeling buses, improved interior circulation, additional stanchions and grab bars, and ergonomic seating designed for older riders.

These steps can make other strategies more effective, especially implementing conditional eligibility, travel training, paratransit feeder to fixed-route service, and fixed-route fare incentives.

As one example, the transit agency in Wenatchee, WA, claims to have reduced ADA paratransit ridership by 41% through a comprehensive program of bus stop improvements combined with introduction of low-floor buses, travel training, a loop route tailored to serve common paratransit origins and destinations, and education of fixed-route drivers and riders about the needs of passengers with disabilities, with no change in eligibility practices.<sup>53</sup>

### **Volunteer Driver Programs**

**Concept:** Volunteers provide door-to-door and often door-through-door service, typically for seniors who are frail and no longer drive. The individuals receiving service would usually but not always be eligible for ADA paratransit service. Some of them need assistance beyond what ADA paratransit provides, such as assistance in getting into the doctor's office once arriving at a medical building. In some cases, volunteers provide only a portion of the rides, while paid drivers provide others. A volunteer driver program is a non-ADA program, typically not operated by a transit agency. It is unrelated to the strategy of having volunteers drive ADA paratransit vehicles that was discussed earlier.

**Current Status:** Examples of volunteer driver programs in the Bay Area include Road Runners, operated by El Camino Hospital in Mountain View, Senior Helpline's Rides for Seniors program in Lafayette, and John Muir Health's Caring Hands program in Walnut Creek. Marin Transit is starting up a volunteer driver program using New Freedom funds as part of its Marin Access mobility management office operated by its paratransit contractor, the Marin Senior Coordinating Council.

Outreach provides reimbursement in the form of a gas card to people who provide rides for friends, co-workers, or family members. In some cases this type of arrangement can save on the cost of ADA paratransit. VTA and Outreach described the case of an ADA eligible rider with a vision disability who had used ADA paratransit for daily work trips. As an alternative, the rider now receives a gas card (given for free to the rider and funded through the broker with nonprofit funds), which she provides to a co-worker in exchange for car-pooling to work. The rider no

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<sup>52</sup> Funding the Public Transportation Needs of an Aging Population, Nelson\Nygaard Consulting Associates, American Public Transportation Association, March 2010.

<sup>53</sup> Presentation by Richard DeRock, Transportation Research Board Annual Meeting, January 2011.

longer has to pay the \$4.00 fare for each ADA trip, which saves her money, and VTA and its broker save the costs of providing roughly 40 one-way ADA paratransit trips each month (or about 500 trips per year) for that rider.

Outreach has also created a web-based program that other agencies can use to manage volunteer driver programs, with functions including managing volunteers, scheduling rides, and tracking ride history and reimbursement. There are also a variety of more specialized volunteer driver programs such as those run by the American Cancer Society and Catholic Charities, whose Day Break program provides escorted transportation for frail, homebound, and/or dependent elders, the majority of whom are suffering from mild to moderate dementia.

In San Mateo County, FISH is a church-based volunteer driver program that has operated for many years.

**Experience in Other Areas:** Focus groups in a study of senior transportation in Northern Virginia found that seniors liked the concept of volunteer drivers to help meet their trip needs, though some voiced concerns about driver training and safety.<sup>54</sup> Towards these issues, some volunteer driver programs require training for the volunteers and virtually all have requirements related to insurance. The Voluntary Action Center of DeKalb County, IL provides, among other services, a volunteer driver program that has a particular emphasis on safety. Volunteers must go through 20 hours of initial training, which includes defensive driving techniques and passenger assistance training, and participate in ongoing training. The non-profit agency's insurance broker ensures that the volunteers are covered under the agency's liability policy. And given the training requirements for the volunteers and the agency's record and years of experience with the program, insurance has not been an issue.<sup>55</sup>

Volunteer driver programs tend to be more common in rural areas where there is limited public transportation, but there is growing interest in such programs in suburban areas. Neighbor Ride in Howard County, MD, which is a growing suburban county mid-way between the Washington, DC and Baltimore metropolitan regions, is one example. The program began in 2004, with impetus from the county's Office of Aging and a local coalition of businesses, transportation providers, senior groups, citizens and others, and developed a comprehensive administrative structure. Neighbor Ride recruits volunteer drivers from the community to transport Howard County seniors age 60 and above for various local and longer distance trips. Seniors are charged for trips, based on zip codes: a trip within the same zip code is \$6; a trip to an adjacent zip code is \$9; and trips outside the county are \$21 or \$33 depending on distance (maximum one-way trip distance, by policy, is 35 miles). Volunteer drivers receive training, must provide insurance information, and, when providing trips, wear name badges and attach a magnetic Neighbor Ride sign to the outside of their car. Seniors must establish an account with the program, from which funds are drawn to pay for trips. As with most volunteer programs, donations are also accepted.

Neighbor Ride reports a total of almost 8,000 trips in FY2010, which is a 33% growth from the year before, with a per trip cost of \$18.50. The largest single item of program expenses is salaries and benefits for the few paid staff members, at 60% of the total, and rent the second largest at 12%. One interesting source of funding for the program comes from the state of Maryland, through its Senior Rides Program. This began as a pilot grant program, funding recipients that provide door-to-door transportation for low- to moderate-income seniors and transitioned to full program status several years later. Grant recipients must provide a 25% match (cash sources only, in-kind volunteer service is not eligible). This very modest state funding program has proved

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<sup>54</sup> "Meeting the Needs of Northern Virginia's Seniors, Final Report," prepared for the Northern Virginia Transportation Commission (NVTC), by NVTC staff, WB&A, and KFH Group, Inc. 2006.

<sup>55</sup> TCRP Report 70, "Guidebook for Change and Innovation at Rural and Small Urban Transit Systems," Transportation Research Board, Washington, D.C., 2001, by KFH Group, Inc.

cost-effective, providing annual grants of approximately \$20,000 to \$25,000 to four to five agencies across the state that provide volunteer driver programs. The funds are very significant for the typical small-scale, community or faith-based organization providing the volunteer driver program.

Neighbor Ride's cost per volunteer driver trip is at the higher end of volunteer driver programs highlighted in the recent APTA research on senior transportation.<sup>56</sup> The two programs at the lower end reported costs of \$5.33 and \$7.47 per trip. The average cost per trip, based on five programs listed in that report, was \$14.33, which is considerably less than typical ADA paratransit costs. If the trips on Neighbor Ride, for example, were provided through Howard County's ADA paratransit program, the cost would be \$34 per trip.

Mileage reimbursement-based driver volunteer programs can be particularly cost-effective. One of the better known of such programs is TRIP, a volunteer driver program sponsored by the Partnership to Preserve Independent Living in Riverside County, CA. With this model, the individual who needs transportation is encouraged to recruit his or her own volunteer driver, and this is the practice for the large majority of the trips. The passenger and driver are both registered into the program and they make their own arrangements for the needed trip. The passenger submits a reimbursement request and is then responsible for paying the volunteer driver. TRIP emphasizes that it is more a human services program than a transportation service, with a focus on getting the individual needing transportation to be part of the solution in obtaining that transportation. According to data from 2007, the program provided more than 82,000 annual trips to 389 unique individuals and travelled 988,000 miles, with an average trip cost of \$4.92.

Although volunteer driver programs are typically operated by non-profit organizations, there are examples of transit agencies that support such programs. The best-known is Ride Connection in Portland, Oregon, which receives substantial support from Portland TriMet. The benefits to TriMet of this arrangement were analyzed in a 2002 TCRP report.<sup>57</sup> In 2000-01 the volunteers (mostly coordinated by Ride Connection's numerous partner agencies) drove 726,846 miles to deliver 150,722 trips. The cost to provide these trips was \$1,467,239, which was paid for by \$911,868 from TriMet as well as rider donations and funding contributed by the 30 organizations under the Ride Connection umbrella. The net cost to TriMet was \$6.05 per trip. If the contributions of the partner agencies are counted, the cost per trip was about \$9.73. By comparison TriMet's ADA paratransit program cost \$19.14 per trip in 2000-01, which would result in a cost of nearly \$2 million over the amount paid to Ride Connection if TriMet provided the same trips. In reality many of these trips would not happen without volunteer services, but if half of them would, then TriMet saved money. Recent conversations with Ride Connection and TriMet staff confirm that the transit agency continues to support this program financially and continues to see benefits in the arrangement.

**Applicability:** Volunteer programs are most common in rural and suburban areas where there is widespread availability of potential drivers. Volunteer programs are almost always operated by non-profit organizations. However, there are examples of such programs being supported by transit agencies. Any Bay Area agency in a suburban area could help support a volunteer driver program.

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<sup>56</sup> "Funding the Public Transportation Needs of an Aging Population," prepared for the America Public Transportation Association (APTA), by Nelson/Nygaard Consulting Associates, March 2010.

<sup>57</sup> TCRP Report 91, "Economic Benefits of Coordinating Human Service Transportation and Transit Services," Jon Burkhardt, David Koffman, and Gail Murray.

**Costs:** Recent APTA research on senior transportation identified volunteer driver programs with costs per trip ranging from \$5 to nearly \$20.<sup>58</sup> Programs that recruit and train drivers and schedule rides are much more expensive than programs that merely provide reimbursement for rides given by friends and family. In the start up phase, a program that recruits, trains, and schedules drivers may have very high cost per trip, since fixed costs for staffing and administration will be spread over relatively few trips.

**Benefits:** Volunteer driver programs provide mobility at a fraction of the cost per trip of ADA paratransit. They also provide mobility that is not offered by ADA paratransit, including escorted, door-through-door service and chained trips such as stopping at the pharmacy on the way home from a trip to the doctor.<sup>59</sup> Beyond their potential for helping reduce ADA paratransit costs, the volunteer driver programs also help seniors continue living independently within the community, which is where most seniors would prefer to live. This trend saves costs for nursing home and assisted living care, alternatives when seniors can no longer live independently.

From the perspective of seniors, volunteer transportation – usually in the volunteer’s private car – most closely resembles a preferred mode of travel, that is, by one’s own private vehicle. Focus groups in a study of senior transportation in Northern Virginia found that seniors liked the concept of volunteer drivers to help meet their trip needs, though some voiced concerns about driver training and safety.<sup>60</sup>

**Barriers:** For most transit operators, direct operation of a volunteer driver program is unlikely to be feasible because of liability issues, issues of having volunteers work with for-profit contractors, and limited experience working with volunteers. Supporting a non-profit program depends on identifying or helping to create a suitable agency that is interested in providing service to the general population of riders needing this service. Further, the transit operator would need to commit a substantial amount of money to help start such a program. In contracting with the Marin Senior Coordinating Council to begin a new volunteer driver program, Marin Transit benefits from the availability of funding from the Vehicle License Fee just passed in [20102009](#).

**Conclusion:** Transit agencies can probably reduce dependence on ADA paratransit by supporting volunteer driver programs run by non-profit community organization, but finding funding for this support will be challenging. There need to be community organizations with the necessary interest and capability.

## Mobility Management

**Concept:** In the context of specialized transportation, mobility management involves facilitating transportation improvement for seniors, persons with disabilities and individuals with lower incomes through a wide range of options, service providers, and strategies. Interest in mobility management has grown since it has been promoted by the United We Ride initiative of FTA and other federal agencies, and since mobility management activities were identified as eligible to be considered as capital expenses with 80% Federal funding under the New Freedom and Job Access / Reverse Commute programs. Among various services and programs, mobility management can include:

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<sup>58</sup> “Funding the Public Transportation Needs of an Aging Population,” prepared for the America Public Transportation Association (APTA), by Nelson\Nygaard Consulting Associates, March 2010, supplemented by more recent information provided by KFH Group.

<sup>59</sup> A 2004 GAO report, “Transportation Disadvantaged Seniors – Efforts to Enhance Senior Mobility Could Benefit from Additional Guidance and Information,” Report to the Chairman, Special Committee on Aging, US Senate, found that chained trips as well as trips where packages must be carried are among the important unmet trip needs for seniors who cannot drive themselves.

<sup>60</sup> “Meeting the Needs of Northern Virginia’s Seniors, Final Report,” prepared for the Northern Virginia Transportation Commission (NVTC), by NVTC staff, WB&A, and KFH Group, Inc. 2006.

- “one-stop” information centers that coordinate information on all transportation options,
- call-centers with trip planning and scheduling,
- travel training,
- transportation brokerages that coordinate providers, funding agencies, and persons needing trips, and
- planning and implementation of coordinated services.

Working with local human service agencies is typically part of mobility management. The agency that acts as mobility manager is often a non-profit organization.

**Current Status:** In the Bay Area, mobility management efforts are underway, with several transit agencies pursuing activities that fall under the concept, including Santa Clara VTA, Marin County Transit, and SamTrans.

In Marin County, the transit agency has a new contract in place that creates a brokerage component, which, besides requiring the non-profit contractor that operates the ADA paratransit service to broker some ADA trips to taxis, also allows some trips to be brokered to community-based providers. This is a community partnership, although such practices may now be referred to as mobility management. While there is limited experience in the county with this new service model, the contractor is sending trips to another non-profit agency for intra-county trips, and there are plans to use a limousine company for longer distance inter-county trips. These other community providers have lower per passenger trip costs than those of the transit agency, yielding operating cost savings.

VTA and its non-profit broker, Outreach, have a variation on this strategy. Outreach operates the ADA paratransit service as a contractor to the transit agency and also offers a variety of alternative transportation options targeted to seniors and persons with disabilities. Essentially, the broker offers one-stop-transportation shopping for seniors and persons with disabilities. The broker’s Senior Transportation Program, for example, provides various services including subsidized taxi trips, volunteer rides for older adults, and gas cards. To the extent that seniors who need specialized transportation can meet their trip needs through alternative options, they may not apply for the more costly ADA paratransit service. Or if they are ADA eligible, they may choose these other options at times when those options better meet their trip needs. For example, if a frail senior needs transportation to a medical appointment, the senior might use a volunteer driver who could provide extra assistance in getting to the appointment and perhaps stop on the way home at the pharmacy. Not only does this trip arrangement better meet the senior’s needs, it is also a less expensive trip for VTA than a trip on ADA paratransit.

Outreach has also established a Mobility Management Center with a web-based system referred to as TripNet. TripNet allows health and human service agencies to manage members, trip reservations, standing orders, and vehicle sharing. It is used to: manage gas cards provided to individuals who give rides as volunteers; take credit card payments; manage others funds; manage discounted taxi rides, Medi-Cal trips, homeless trips, aging trips, etc. It includes a fleet inventory system, GIS mapping and vehicle routing for emergency evacuation, staging areas, and accessible shelters.

**Experience in Other Areas:** Many states and localities have been pursuing mobility management in the past few years with funding available through FTA’s New Freedom and JARC programs. However, the concepts of mobility management have been implemented by some agencies for many years. Notably, Paratransit, Inc. in Sacramento has provided services that would now be termed mobility management for since the 1970s. Paratransit, Inc. assists community agencies to help those agencies maintain viable transportation programs for their clients, so those clients do not need to use ADA paratransit. As an example of a successful

partnership, Paratransit, Inc. cites the Asian Community Center (ACC) in Sacramento. Using two "retired" vehicles provided by Paratransit, Inc, ACC organized a cadre of 55 volunteer drivers to provide nearly 8,000 trips during Fiscal Year 2008 at a fraction of the cost of comparable dial-a-ride type service. Partner agencies include adult day health care centers, United Cerebral Palsy, Easter Seals, and the Developmental Disabilities Service Organization. All together this program provides more trips than the ADA paratransit service that Paratransit, Inc. operates for Sacramento Regional Transit.

Other Paratransit, Inc. programs include:

- A maintenance shop for its own vehicles and those of other agencies in the Sacramento area. This gives those agencies access to expert maintenance at competitive rates and at times that do not interfere with the demand of providing service.
- Multiple travel training programs that teach disabled, elderly and low-income individuals to use fixed-route public transit rather than door-to-door service.
- A one-stop call center, called Ride Quest, that provides information on transportation options for low income, seniors, and disabled persons in the Sacramento region.

JAUNT in Charlottesville, VA, has an interesting approach towards mobility management focused on assisting local human service agencies to use their own transportation resources more effectively. JAUNT is the local ADA paratransit provider, but began originally as a non-profit formed by several human service agencies to provide a joint transportation system for agency clients. As a mobility manager, JAUNT has reached out to local agencies and, between the start of the program in late 2008 through mid-2010, has worked with 11 agencies individually, assessing their transportation resources and developing recommendations to help them provide improved transportation. The recommendations, packaged in a report prepared for each agency and provided without charge, address: opportunities to coordinate services with other providers, including JAUNT; vehicle sharing options with other human service agencies; and potential use of private transportation providers such as taxis, among other recommendations. To the extent that the human service agencies in the Charlottesville area continue to serve their clients in a more cost-effective manner based on the mobility manager's recommendations, it will help prevent those agencies from shifting trips to the transit agency's ADA paratransit program and improve the agencies' transportation service.

**Applicability:** All areas would benefit from mobility management, but not necessarily as a direct function of the transit agency.

**Cost:** Establishing a mobility management function involves costs for staffing. Depending on the activities undertaken, there may be costs for management, call taking, providing travel training, and continuous updating of information about available programs.

**Benefits:** Mobility management has the potential to preserve and expand options other than ADA paratransit, thereby reducing demands on ADA paratransit and providing more mobility for people with disabilities. The most relevant case in the Bay Area for quantifying these benefits would be the experience of Outreach in Santa Clara County, with due attention to differences in circumstances among counties, including whether the same benefits could be achieved by a mobility manager that is not also the ADA paratransit operator.

**Barriers:** Mobility management requires continuing expenditures with the expectation of future benefits that are not easily quantified.

**Conclusion:** Mobility management deserves the support of MTC and transit operators and the assessment of its benefits.



## Targeted Transit Promotion to Seniors

**Concept:** Targeted marketing to encourage seniors to use fixed-route transit service may include promotions based on a limited period (a week or a month) when transit is free for seniors, distributing targeted marketing materials through senior housing and senior centers, and helping older people learn to use transit by providing training or group trips.

**Current Status:** In the Bay Area, SamTrans, CCCTA, VTA and the Napa County Transportation and Planning Agency are among the transit agencies with targeted marking and/or transit ambassador programs. San Francisco promotes use of the Senior Clipper card. SamTrans's Mobility Ambassadors are stationed at senior centers, where they make presentations, provide information, and organize field trips on regularly scheduled buses. The program creates enjoyable activities that also teach transit skills.

**Experience in Other Areas:** There are numerous examples of targeted marketing to seniors. A highly successful marketing campaign aimed at “younger” seniors was conducted some years ago in San Diego. Titled *Seniors On the Go*, the program gave seniors throughout San Diego a free week of public transit, with targeted marketing and informational materials that provided, among others items, specific directions on how to take transit to various local popular destinations, such as historic *Old Town*. Underlying these efforts was an objective to make transit *fun*. In the campaign's first year, 90,000 seniors picked up the Transit Information Kits and nearly 50,000 seniors actually used transit. In the second year, 100,000 kits were distributed and more than 60,000 seniors took transit trips during the free week. Funding for the campaign was provided by several sources, including the San Diego transit agency, AARP, and several private sponsors including a major grocery store chain. Survey results showed that almost 25% of participating seniors were first-time-ever transit users.<sup>61</sup> Reportedly, the seniors felt very comfortable trying transit that week, in part because there was “safety in numbers.” Similar campaigns were later conducted by Santa Rosa and SamTrans.

Orange County, CA provides another example of a comprehensive marketing campaign to encourage seniors to ride transit. Called the Senior Marketing and Outreach Program, the Orange County Transportation Authority's campaign began in 2002 with a specific objective of increasing senior ridership. Targeting first the 30 different senior centers throughout the large county and then senior housing facilities, the campaign created marketing and informational materials tailored to each community in the county, so that seniors would have transit information specific to their own community. Similar to the San Diego marketing campaign, the Orange County transit agency provided information on taking transit to popular destinations that seniors liked to frequent – again, trying to make transit *fun*. Over the first year of the campaign, the transit agency spent approximately \$200,000 on outside assistance for marketing materials and consulting assistance; the second year involved primarily transit agency staff time and in-house marketing materials. The transit agency deemed the campaign successful, with transit ridership by seniors increasing over a four-month period from about 4% to about 10% of total ridership.

**Applicability:** Targeted marketing to seniors is applicable everywhere but especially in areas with rapidly growing senior populations who might not use transit without encouragement, for example in suburban areas where most seniors depend on driving for mobility.

**Cost:** A comprehensive marketing campaign will cost up to several hundred thousand dollars, but a transit ambassador or peer training program can rely heavily on volunteers, while still needing staff time for continuing recruitment, training, and oversight.

**Benefits:** If older adults can be encouraged to try transit and then use it before they can no longer drive and look for alternatives, they will become more comfortable with transit and may use

<sup>61</sup> TCRP Report 70.

it as a reasonable option for local trip-making, potentially delaying the time when they apply for ADA paratransit. Importantly, use of transit will also give seniors more independence and mobility, boosting transit ridership as well as increasing the constituency for transit. In the long run marketing transit to seniors should help slow the growth in demand and cost for ADA paratransit.

**Barriers:** The only barrier is funding.

**Conclusion:** Targeted transit promotion to seniors is a worthwhile strategy that should be encouraged to the extent that funding allows.

## Shuttles and Community Buses

**Concept:** Senior-friendly shuttles, “community buses,” or circulators are generally designed to serve short trips within communities or neighborhoods with an emphasis on seniors and destinations they frequent. These services may also include fixed-route services that deviate on request for seniors and people with disabilities. In some cases, shopper routes are operated as an adjunct to the ADA paratransit program.

**Current Status:** Transit operators with shuttles include AC Transit, Marin Transit, San Francisco MTA, and VTA. In addition, shuttles are operated by many cities such as Antioch, Oakland, San Leandro, Menlo Park, Palo Alto, and several North Bay cities. Typically, these shuttles are available to the general public, but at least some of them are designed and marketed for seniors.

**Experience in Other Areas:** The transit agency in Reno, NV, has operated “shopper routes” for many years that are designed to serve ADA eligible seniors. Currently there are four shopper routes, operating mornings to mid-afternoon on weekdays. The vehicles travel a general route, with one vehicle per route, passing by senior housing complexes and apartments. Pick-ups and drop-offs, however, are provided anywhere within each route’s geographic area. Only same-day reservations are accepted. Seniors may also board without a reservation at certain housing complexes, when staff posts a sign at the building front that signals the driver to stop to pick up a resident. Fares are the same as for ADA paratransit, and the drivers typically provide extra assistance with packages and shopping bags. Productivity on these shopper routes is reported at 3.6 passenger trips per hour, with approximately 1,900 trips per month. The transit agency estimates annual cost savings at \$170,000 over ADA paratransit service.<sup>62</sup>

Arlington County, VA, offers a number of transportation services designed for seniors, including “Senior Loop” service, which consists of three “loop” routes that operate scheduled service to link four senior housing facilities with local grocery stores and pharmacies. Anyone living in the housing facilities may use the service, as well as other Arlington County residents age 55 and older who can get to one of the housing facilities for a pick up. Riders must register to use the service. Trips are to be reserved a day in advance, and the service is free. Senior Loop carried almost 8,000 passenger trips in FY 2010 with a per passenger trip cost of \$5.39, substantially less than the \$30.23 per trip cost on the county’s paratransit complement to its fixed-route service.

In Portland, OR, Ride Connection operates a number of “community shuttles” designed to improve local mobility options for seniors as well as persons with disabilities. Ride Connection is a non-profit organization with a large network of service providers and works with Portland TriMet to provide specialized transportation services in the region. One example of these shuttles is the Northwest Portland Ministries Senior Shuttle, a route deviation service targeting seniors and persons with disabilities living in high rise buildings in downtown Portland. The one-hour loop route connects riders with local shopping and medical facilities, as well as fixed-route service.

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<sup>62</sup> TCRP Synthesis 76.

According to a TCRP report, almost 4,000 one-way trips were provided in FY07 at a per passenger trip cost of \$16.40.<sup>63</sup> A comparable passenger trip on Portland's ADA paratransit service was reported at \$26.73 in the same year (2007 NTD), more than 60% higher than a trip on the community shuttle.

**Applicability:** Shuttles are a viable option where there are concentrations of older people and popular destinations that can be linked. Shuttles are often operated by cities rather than transit agencies.

**Cost:** Shuttles involve continuing operating cost, as well the cost of purchasing vehicles and start up planning.

**Benefits:** Reports of the effectiveness of shuttles vary. In Reno, Nevada, the transit agency operates four shopper routes to serve ADA eligible seniors. Productivity on these shopper routes is reported at 3.6 passenger trips per hour, with approximately 1,900 trips per month. The transit agency estimates annual cost savings at \$170,000.<sup>64</sup> Other examples of successful shuttles come from Portland, Oregon, and Arlington County, Virginia. However, AC Transit reports that its shuttle routes are under-utilized.

**Barriers:** Finding continuing funding to operate additional service will be a challenge. Transit operators may also be reluctant to add service that appears to duplicate existing routes.

**Conclusion:** Shuttles appear to be cost effective in some situations but involve considerable operating cost, while benefits for ADA paratransit depend on details of design and policy.

## Walkable Communities and Land Use Planning

**Concept:** The term "walkable communities" refers to communities that are pedestrian friendly, with sidewalks and pathways connecting residential areas with activity centers. Walkable communities encourage walking with mixed land uses, so that retail and shopping areas are close by or interspersed with residential areas, making walking trips for shopping and other purposes feasible. Walkable communities also have accessible pathways that can be used by people who use wheelchairs. More generally, land use and community planning efforts can influence transportation and mobility options for seniors and persons with disabilities and indirectly contribute to the sustainability of ADA paratransit by facilitating alternative transportation options that are less costly, particularly pedestrian and fixed-route transit trips. Significantly, more compact, mixed use communities with effective pedestrian facilities allow for more walking trips and improve both the choice and effectiveness of transit by creating higher densities and improved access to transit.

**Current Status:** While some communities are working towards improving their pedestrian environments, many communities are now considered walkable, including a number in the Bay Area, according to Walkable Communities, Inc., a non-profit agency that assists communities become more walkable. These include, among others, Los Gatos, San Francisco, Oakland and Berkeley.<sup>65</sup> MTC's Transportation 2035 Plan, "Change in Motion," supports: "a growth pattern that creates complete communities with ready, safe and close access to jobs, shopping and services" and policies that will create conditions "Where we have a viable choice to leave our autos at home and take advantage of a seamless network of accessible pedestrian and bicycle paths that connect to nearby bus, rail and ferry services that can carry us to work, school, shopping, services or recreation."

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<sup>63</sup> TCRP Synthesis 76.

<sup>64</sup> TCRP Synthesis 74, "Policies and Practices for Effectively and Efficiently Meeting ADA Paratransit Demand," David Chia, Planners Collaborative, Transportation Research Board, 2008.

<sup>65</sup> Walkable Communities, Inc. at <http://www.walkable.org/faqs.html>.

MTC has also included a section on “Pedestrian-Friendly Design Standards” in its Station Area Plan guidance, and a required element on “Accessible Design” with the requirement that, “If new housing is proposed within the station area, at least 10% of townhomes should be habitable by persons with disabilities” with “Accessible paths of travel between the station and essential destinations within the station area.” As a result of work by MTC’s Elderly and Disabled Advisory Committee, the scoring criteria for the Transportation for Livable Communities program include points for “Accessibility: Extent to which project area exhibits design guidelines that address the needs of the growing elderly and disabled population that go beyond ADA access standards.” In 2010, MTC introduced a bill, AB 2516 (Hill), designed to require that at least 10% of townhomes within a 1/2 mile of transit have an accessible route to transit and provide for interior habitability. The bill passed the Assembly Judiciary Committee but got hung up in the Appropriations Committee due to fiscal concerns.

**Experience in Other Areas:** Enhancements to the pedestrian environment that focus on improving the accessibility of bus stops and pathways from bus stops increase the potential for individuals with disabilities to use fixed-route transit. And when such enhancements are coupled with implementation of trip-by-trip eligibility, fixed-route trip-making by conditionally eligible ADA riders will increase. A more walkable community, then, increases the role that fixed-route transit can serve in meeting the transportation needs of persons with disabilities and helps eliminate trips and costs for ADA paratransit.

Communities can use ADA required self-evaluation and transition plans to help identify and prioritize sidewalk and pathway improvements that are important for individuals with disabilities and provide better access to public transit. The ADA requires that cities and other public entities provide access to programs, services and activities for persons with disabilities, which covers pedestrian facilities when these are available. The transition plans and their updates are to address improvements needed to provide accessibility, including pedestrian access, and a schedule for making the improvements. The needed improvements can be prioritized with input from the disability community, which will help ensure that those improvements most needed by persons with disabilities are made first. The City of Bellevue, WA, for example, undertook an ADA sidewalk and curb ramp self-evaluation update in 2008 to assess accessibility needs for existing pedestrian facilities in the public rights of way.<sup>66</sup> The City’s approach involved data collection, data analysis, and barrier ranking. The city consulted with the local disability community to rank barriers, so that those sidewalks and curb ramps most important for improving accessibility for residents with disabilities received high rankings, rather than those in the worst condition.

Detailed attention to street design is needed to provide a walkable environment. Design elements should work together to slow traffic and provide sidewalks and, importantly, cross walks that are safe and attractive. Traffic speeds on roads adjacent to pedestrian movement should be no greater than 25 to 30 mph, considered the maximum for pedestrian comfort. Crosswalks should be designed to accommodate the slower walking speeds of older pedestrians. Curb bulb-outs, for example, are a design element that reduces the distance that a pedestrian must travel to cross the street and also improves safety by eliminating the need to look around parked cars or, on streets with no parking, by forcing vehicles to slow down particularly when making a turn at the intersection.<sup>67</sup>

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<sup>66</sup> “Bellevue’s ADA Sidewalk and Curb Ramp Compliance Program,” by F. Loewenherz, City of Bellevue, Washington, Washington State LTP News, Issue 103 Winter 2010, available at [www.bellevuewa.gov/pdf/.../ADA\\_sidewalk\\_curb\\_ramp\\_article.pdf](http://www.bellevuewa.gov/pdf/.../ADA_sidewalk_curb_ramp_article.pdf)

<sup>67</sup> NVTC Report; APTA Report.

**Applicability:** The need and opportunity to improve walkability and land use patterns arises principally in suburban areas, although pedestrian *safety* is a major issue in central cities where pedestrian usage is already high. However, transit agencies probably have a limited role.

**Cost:** The public sector costs of policies and plans that encourage more pedestrian friendly environments have not been quantified but are probably not large. However, capital improvements to streets and intersections can be expensive compared to the costs of operating ADA paratransit.

**Benefits:** One study of senior transportation in Northern Virginia (suburban Washington, DC) showed that people age 75 and older living in denser, mixed-use neighborhoods take 20% more trips overall and three times as many walking trips as similar people living in more typical suburban neighborhoods.<sup>68</sup>

**Barriers:** Land use planning is the responsibility of local cities and counties and involves competing interests, including interests other than older people or advocates of walking. Pedestrian improvements require balancing the value of better pedestrian access with the interests of motorists, land owners, and businesses.

**Conclusion:** Transit agencies will continue to play a supportive role in creating more walkable communities with mixed uses that allow for walking to destinations, including access by people who use wheelchairs. MTC can continue to provide leadership and fund projects that help create walkable communities. Funding is needed to implement street and intersection improvements.

## **Coordination with Human Service Transportation.**

**Concept:** The region can work to promote participation by state human service agencies in coordination efforts. This would require state mandates for coordination that apply not just to public transportation agencies but also to the human service agencies with which coordination is needed. An effective coordination process would seek ways for transit operators and human service agencies to cooperate in ways that provide more efficient service that reduces cost for all involved and that matches riders with the most appropriate service for them. In the short run, transit operators or their paratransit providers can participate in providing non-emergency medical transportation (NEMT) for Medi-Cal and receive payment for this service.

**Current Status:** Despite the lack of state mandates that apply to human service agencies, there are some examples of coordination between transit agencies or their paratransit providers and human service agencies. Examples include SFMTA's Group Van program and the activities of Outreach that were described in the section on Mobility Management. CCCTA's van donation program (described under Partnering with Community Agencies to Supplement ADA Service) and SamTrans service to agencies that pay a higher fare (described under Premium Charges for Service Beyond ADA Requirements) are also forms of coordination.

A combination of federal and state laws and regulations limits the role that public transit can play in NEMT in California. Practices popular in other states that are not currently an option in California include brokerages, purchase of transit passes, and purchase of NEMT trips on ADA paratransit based on the full cost of service. However, some Bay Area operators have been able to participate in NEMT in limited ways. Tri-Delta Transit has created a Medical Van program as a separate service, distinct from ADA paratransit, that is qualified as an NEMT provider and paid at Medi-Cal's established rate for lift van service. Outreach reports positive results from providing technical assistance to the Santa Clara Family Health Plan (one of two Medi-Cal HMO providers in the county) to assist them in managing a growing transportation program for their members.

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<sup>68</sup> Northern Virginia Transportation Commission report.

In addition, there has been some action at the State level. According to Caltrans' Mobility Action Plan, completed in 2010, the agency plans to work with the relevant State departments on the possibility of establishing brokerages for NEMT in California as recommended by a report of the Legislative Analyst.<sup>69</sup>

**Applicability:** Limited coordination with human service agencies is appropriate and possible for any transit operator. Also, in principle, any public transit agency or its paratransit provider can become a Medi-Cal NEMT provider. It has not been tested whether an application to become a provider by a large transit agency would be welcomed by the Department of Health Care Services. It may also be possible for transit agencies to benefit by participating with a county Medi-Cal provider to claim a portion of transportation costs as is currently done in San Diego County.

**Cost:** Becoming a Medi-Cal provider requires training in Medi-Cal procedures and billing and purchase of medical billing software that can interface with the State's billing system. Substantial administrative effort is needed to file and obtain approval for Treatment Authorization Requests, which are needed before any transportation claims can be approved. Drivers need to be certified in Basic Life Support, which requires an eight-hour class given by the Red Cross and other organizations. Vehicles need to carry an expanded first aid kit and a transport (folding) wheelchair. These requirements may not apply for claims made through a county health care provider as in San Diego County. The costs of broader human service coordination depend on the type of coordination, and might involve making available vans or other assistance to help agencies maintain their programs.

**Benefits:** Reportedly, San Diego providers are receiving \$1 million to \$1.5 million per year in Medi-Cal payments. Tri-Delta Transit is receiving about \$283,000 per year from Medi-Cal or about 7% of the agency's paratransit operating budget. Actual savings may be a little less than this since some of the Medical Van riders might use other NEMT vendors if Medical Van did not exist rather than Tri-Delta Dial-a-Ride. The broader benefits of human service coordination, given effective mandates applying to all parties, have not been quantified but are potentially very large.

**Barriers:** Becoming an NEMT provider requires a small investment in training, equipment, and software and learning to negotiate the Medi-Cal bureaucracy. Medi-Cal's receptivity to such arrangements by large operators is unknown. It is also unknown whether the San Diego experience can be duplicated in other counties. The type of working relationship that Outreach has established with the Santa Clara Family Health Plan may be more difficult for a public agency or a for-profit provider to establish. Establishing state level mandates for human service agencies to coordinate with ADA paratransit would likely face strong organized opposition.

**Conclusion:** Substantial but unknown benefits may be available from Medi-Cal payments for NEMT and for broader coordination with human service transportation. Operators may be able to work with Medi-Cal under existing rules but action to change state legislation would be needed for more effective broader coordination.

## **Consolidated Transportation Service Agencies**

The Social Service Transportation Improvement Act (also known as Assembly Bill 120) was enacted in 1979 "to improve transportation service required by social service recipients by promoting the consolidation of social service transportation services." By consolidating these services, the legislature intended that transportation service providers would achieve cost efficiencies by purchasing necessary equipment together in bulk; training drivers to lower

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<sup>69</sup> Legislative Analyst's Office, "DHCS—The Broker Model for Medicaid Nonemergency Medical Transportation," in "2009-10 Budget Analysis Series: Health," February 2009.

insurance and other costs; having an efficient centralized dispatching system; having a centralized maintenance system; having centralized administration of social service programs to eliminate duplication; and identifying and consolidating existing funding sources for more effective and cost-efficient use.

The Act required each transportation planning agency to adopt an action plan by December 1981 to achieve purposes of the Act and to designate at least one consolidated transportation service agency (CTSA). A CTSA can directly claim up to 5% of a local jurisdiction's Transportation Development Act (TDA) sales tax funds with which it can operate service and perform coordination functions. However, these are not additional funds but a portion of funds that would otherwise be available to other agencies, including transit districts and municipal operators. Beyond having the ability to claim funds and operate service, the functions of CTSA's are not clearly specified. In particular, CTSA's currently do not have the authority to either enforce or empower coordination efforts in the regions they represent.<sup>70</sup>

Many but not all CTSA's are non-profit agencies. Well known examples include Paratransit, Inc. in Sacramento, Access Services in Los Angeles, and Easy Lift Transportation in Santa Barbara. However, there are also numerous transit agencies and planning agencies that are designated as CTSA's including Monterey-Salinas Transit, Orange County Transportation Authority, and the Mendocino Transit Authority. In the Bay Area, at one time there were multiple CTSA's including Outreach and Escort, the Community Services Agency of Los Altos and Mountain View, the Coastside Opportunity Center, and the Napa County Transportation Planning Agency. After passage of the ADA in 1990, it became the practice in the Bay Area for transit agencies to claim all available TDA funds and the existing CTSA's lost their designations. At present, Outreach is the only CTSA designated in the Bay Area, having achieved re-designation in 2010 after a period when there were no CTSA's in the Bay Area. Note that Outreach does not claim TDA funds, though it does receive funding under other grant programs such as FTA Sec. 5310 and New Freedom.

The Caltrans Mobility Action Plan (MAP) process, completed in 2010, included a focus on the role of CTSA's. The final report cites a CalACT e-Book about CTSA's to the effect that:

*"Without authority to require cooperation of local social service agencies, the more mature, fully-functioning CTSA's have developed strategies to promote, and explain the benefits of coordination and deliver it at the local level. Persistence, political savvy, and friendly persuasion have effectively served these CTSA's, some of which are direct recipients of federal operating and capital funding programs as well as local transportation sales tax revenues specifically for providing community transit to the transportation disadvantaged."*<sup>71</sup>

The MAP report recommends steps to enhance the role of CTSA's in the future, including giving priority for funding for "coordinated projects and programs developed by CTSA's that result in a measurable increase in trips provided and/or arranged for members of the target populations (seniors, persons with disabilities and low income individuals)." However, the scoring worksheet for the most recent cycle of 5310 applications does not include such a priority, though it does prioritize coordination efforts as it has for many years. Caltrans may award demonstration grants in the future that would go to CTSA's.

<sup>70</sup> "Mobility Action Plan Phase I Implementation Study Final Report: Assessing Human Service Transportation Coordination in California, A Legal and Regulatory Analysis," Judith Norman, California Department of Transportation, June 2010.

<sup>71</sup> California Association for Coordinated Transportation, CTSA e-Book, at <http://www.calact.org/doc.aspx?17>.

Aside from the technical issues of CTSA designation in California, non-profit organizations have been able to achieve notable successes in coordination. In the Bay Area, Outreach cites multiple examples of the way that it has been able to work with human service agencies to help preserve human service transportation programs. Examples include helping the Regional Center, the county Medi-Cal provider, and several adult day health programs. According to Outreach's director, being able to speak as one non-profit to another makes it more possible to achieve a mutually beneficial arrangement. In Sacramento, Paratransit, Inc. has been very successful in maintaining human service transportation programs using funding from a local sales tax measure. Currently, Paratransit, Inc. coordinates human service transportation that provides as many trips as the ADA paratransit program that it operates for Sacramento Regional Transit. An example of a non-CTSA non-profit is Ride Connection in Portland, Oregon. With financial support from the transit agency, TriMet, Ride Connection coordinates a wide variety of transportation services provided by over 30 community partners serving over 370,000 rides last year, according to the agency's website.<sup>72</sup>

From the point of view of transit agencies, an independent non-profit agency can establish another voice that advocates for transportation, can access funding that is not available to a public agency, can mobilize volunteers, and may reduce the demand for ADA paratransit by helping preserve human service transportation. However, an independent non-profit agency may also compete for funding with the transit agency and may, over time, develop its own priorities and perspectives that do not always align with those of the transit agency. Addressing funding and balancing the differing priorities and perspectives of the transit agency and the non-profit are key ingredients for a successful partnership between the two.

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<sup>72</sup> See [www.rideconnection.org](http://www.rideconnection.org), accessed June 21, 2011.



## Chapter 6. Priority Strategies

All the strategies discussed in the preceding chapter, have been prioritized based on the analysis. Some strategies have been combined, because they are closely related. The priorities are based on six factors as summarized in the following tables. The factors and the symbols used to represent them are:

### Financial Impact:

★ ★ ★	High: potential for several percent reduction in operating cost
★ ★	Medium: potential for one or two percent reduction in operating cost
★	Low: potential for less than one percent reduction in operating cost

These assessments take into account the cost of implementation.

### Impact on Riders

+	Positive: potential to improve the mobility of people with disabilities
=	Neutral: no significant impact on the mobility of people with disabilities, or a mixed impact
—	Negative: potential to reduce the mobility of people with disabilities.

### Geographic Area

Degree of applicability to a range of operators throughout the Bay Area:

- Everywhere
- Widespread
- Limited

### Years Needed to Implement

One of three time frames:

- 1 – 2 years
- 2 – 5 years
- 5 – 10 years

### Ease of Implementation

★ ★ ★	No significant barriers to implementation
★ ★	Barriers exist that can be overcome with some effort
★	High barriers exist that could prove insurmountable



**Regional Priority Strategies – Priority 1**

Strategy	Comments	Financial Impact	Impact on Riders	Geographic Area	Years Needed to Implement	Ease of Implementation
Travel Training and Promotion to Seniors	Expanding travel training would increase mobility and help reduce growth of ADA paratransit demand, especially working with the schools and Regional Centers.	★ ★ ★	+	Everywhere	2-5	★ ★ ★
Enhanced ADA Paratransit Certification Process	Depending on the transit agency, available cost savings range from none to substantial. One centralized regional process is not needed.	★ ★ ★	=	Widespread	2-5	★ ★
Implementing Conditional Eligibility	Opportunities exist at several transit operators in combination with an enhanced eligibility process. Some operators already have an eligibility process that can support enforcement of conditional eligibility. One operator is already conducting a type of conditional eligibility enforcement.	★ ★ ★	=	Everywhere	2-5	★ ★
Premium Charges for Service Beyond ADA Requirements	The main opportunity is establishing higher fares for special service to human service agencies that exceeds ADA requirements.	★ ★ ★	—	Everywhere	2-5	★
Human Service Transportation Coordination and Vehicle Sharing	Local agencies can share vehicle capacity now. Greater benefits may be available, but need a regional effort to change state policy.	★ ★ ★	+	Everywhere	5-10	★
Walkable Communities, Complete Streets, and Land Use Planning	Makes transit and walking more viable alternatives to paratransit. Requires an active role from cities and counties. MTC and ABAG fund relevant programs. Benefits more than paratransit.	★ ★ ★	+	Everywhere	5-10	★

## Medium-Priority Strategies – Priority 2

These strategies all have potential to manage costs and/or enhance mobility, but are ranked lower because of limited geographic application, difficulty of implementation, or the uncertain or long-term nature of benefits.

Strategy	Comments	Financial Impact	Impact on Riders	Geographic Area	Years Needed to Implement	Ease of Implementation
Enhance fixed-route service	Reduced need for paratransit. Supports travel training and implementing conditional eligibility.	★ ★	+	Everywhere	2-5	★
Partner with Community Agencies to Supplement ADA Service	Partnerships with human service agencies are promising for some transit agencies. Depends on identifying willing programs. Part of a strategy to preserve and expand human service transportation.	★ ★	+	Everywhere	2-5	★ ★
Vehicle Sharing	An effective strategy when pursued by a non-profit agency.	★ ★	+	Marin/ Sonoma	2-5	★ ★
Consolidated Administration or Operations	Possible opportunities in a few areas; principal benefit would be through enabling a separate control center, staffing for conditional eligibility.	★ ★	+	East Bay Northern Counties South Bay	2-5	★
Separating a Control Center from Vehicle Operations	Except for one operator, requires consolidating operations first. Then productivity and cost savings should be possible.	★ ★	+	East Bay Marin/ Sonoma Marin Solano	2-5	★
Targeted Transit Promotion to Seniors	Should be encouraged to the extent that funding allows. Payoff will be long-term. (Merged with Travel Training.)	★	+	Everywhere	1-2	★ ★
Shuttles and Community Buses	Shuttles may be cost effective in some situations but benefits for ADA paratransit depend on details of design and policies.	★	+	Everywhere	2-5	★ ★

Strategy	Comments	Financial Impact	Impact on Riders	Geographic Area	Years Needed to Implement	Ease of Implementation
Align Service to ADA Requirements	Stricter application of policies requiring attendants for some riders may be beneficial. Local operators should make decisions about fares and service area.	★	=	Attendant policies: everywhere	1-2	★★
Volunteer Driver Programs (non-ADA, supplementary)	Dependence on ADA paratransit may be reduced by supporting volunteer driver programs run by non-profit community organizations if funding is available.	★	+	Everywhere except SF	2-5	★
Targeted Transit Promotion to Seniors	Should be encouraged to the extent that funding allows. Payoff will be long-term.	★	+	Everywhere	1-2	★★
Shuttles and Community Buses	Shuttles may be cost effective in some situations but benefits for ADA paratransit depend on details of design and policies.	★	+	Everywhere	2-5	★★
Manage Supply of Revenue Hours to Match Demand	Depends on restructuring service delivery method to establish separate control centers.	★★	=	East Bay North Bay	2-5	★
Mobility Management	A community-based strategy for coordination that connects individuals with a range of services. Deserves support and further assessment of benefits.	★	+	Marin/ Sonoma East Bay SF	2-5	★
Paratransit Feeder to Fixed-Route Service	Could be implemented at most Bay Area transit systems as part of a program of implementing conditional eligibility screening.	★★	—	Everywhere except Solano	2-5	★
Consolidated Transportation Service Agencies	Establishes potential priority for some funding. One strategy for mobility management. Benefits of non-profit operators depend on relationships with transit operators.	★	+	To be determined	2-5	To be determined

Strategy	Comments	Financial Impact	Impact on Riders	Geographic Area	Years Needed to Implement	Ease of Implementation
Paratransit Technology	Operators should continue with plans for implementing IVR and to make full use of AVL/MDTs.	★	+	North Bay East Bay SF	2-5	★
Alternative and Hybrid Services	May be appropriate to replace under-performing routes on the fringes of a service area or in place of new fixed-route service on the fringes of a service area.	★	+	Marin/ Sonoma Solano East Bay Inland	2-5	★★
Internal Cost Cutting	Operators need to determine opportunities based on local circumstances.	★	?	Unknown	1-2	★
Taxi Trip Subsidies	Taxi subsidies by transit agencies or cities are useful where conditions allow and if funding is available.	Uncertain	++	South Bay Marin East Bay Inland	2-5	★

### Low Priority Strategies

These strategies are all useful in principle, but, depending on the operator, they have either been implemented, are already a routine part of operations, or are not applicable because of local operating methods and conditions.

Strategy	Comments	Financial Impact	Impact on Riders	Geographic Area	Years Needed to Implement	Ease of Implementation
Capitalizing Facilities and Vehicles	Depends on MTC exploring possibilities for expanded application of capital funds for ADA paratransit balanced with fixed-route transit needs.	★	=	SF	2-5	★
Controlling No-Shows and Late Cancellations	Maintain and enhance programs to control no-shows and late cancellations as needed based on local circumstances.	Uncertain	=	Nowhere	not applicable	Not applicable
Changes to Operating Policies	Operators should make changes as appropriate based on local circumstances.	★	—	Most operators	1-2	★

Strategy	Comments	Financial Impact	Impact on Riders	Geographic Area	Years Needed to Implement	Ease of Implementation
Effective Use of Taxis and Other Non-Dedicated Vehicles	There are few opportunities without changes to taxicab ordinances and other steps to enhance taxi service, including more widespread adoption of accessible vehicles.	Uncertain	=	Nowhere	5-10	★
Vehicle Mix	All operators experiment with their vehicle mix and see few opportunities for improvement.	★	=	Uncertain	2-5	★
Use of Volunteer Drivers (in ADA paratransit)	No further applications in the Bay Area for volunteer drivers on ADA paratransit vehicles.	None	=	Nowhere	Not applicable	Not applicable
Fare Incentives to Use Fixed-route Service	Most large Bay Area transit agencies already offer free or very inexpensive fixed-route service for ADA-eligible passengers.	Uncertain	+	Except South Bay	1-2	★★★





## Appendix A. Non-ADA Paratransit Programs

Agency Name	Cities	Description of Service	Funding Sources (excluding farebox)
Alameda CTC	Fremont, Newark, Union City	The Tri-City Taxi Voucher Program is a same day, wheelchair accessible transportation service that provides a limited number of subsidized taxi rides to enrolled participants of the Fremont, Newark and Union City Paratransit Programs.	Alameda County Measure B Gap Funds.
City of Alameda	Alameda	Taxi Voucher program for seniors and people with disabilities; Fixed route shuttle provides access to major shopping destinations and medical facilities in City; Group trips for seniors and people with disabilities.	Alameda County Measure B
City of Albany	Albany	Subsidized taxi program for seniors and people with disabilities; Albany Senior Center Community Shuttle Bus provides service to local grocery stores; Group trips for seniors and people with disabilities.	Alameda County Measure B
City of Berkeley	Berkeley	Berkeley Paratransit Services provides a limited amount of free taxi scrip, wheelchair-van vouchers, and East Bay Paratransit tickets to participants in the program.	Alameda County Measure B and general fund
City of Berkeley	Berkeley	This program has three vans that transport seniors to and from each of the three Senior Centers in Berkeley. It is currently only funded for two drivers. On specific days, seniors are transported to pharmacies, grocery stores and some recreational trips.	General Fund and vehicle replacement program
City of Emeryville	Emeryville	Subsidized taxi program for seniors and people with disabilities; 8-To-Go Shuttle is scheduled door-to-door, shared ride transportation within Emeryville; Group trips for seniors.	Alameda County Measure B

Agency Name	Cities	Description of Service	Funding Sources (excluding farebox)
City of Fremont	Fremont	Door-to-door shared ride paratransit services for Fremont residents 80 and older or disabled residents; trips are provided within Fremont, Newark and Union City. Group transportation services (shopping and social/recreational trips) are available for housing complexes and other community organizations that serve disabled individuals or seniors; city outreach workers available to facilitate group trips for frail seniors or those with language barriers. Group trips provided to destinations within 30 miles of the Fremont Senior Center and to groups of 6 or more individuals.	Alameda County Measure B; FTA 5310
City of Hayward	Hayward	The City of Hayward provides a separate paratransit service paid for by Alameda County Measure B funds, which is designed to serve as a back-up/safety net transportation service for those situations that East Bay Paratransit is unable to serve. Hayward also provides funding for Alzheimers Services of the East Bay (ASEB) to transport Central Alameda County clients to a day program using drivers who are specially trained members of ASEB staff. Hayward provides funding for transporting home-delivered meals to isolated and homebound seniors.	Alameda County Measure B
City of Oakland	Oakland	City of Oakland contracts with taxi, wheelchair vans and shuttles to offer a door-to-door subsidized transportation service to eligible program participants who cannot access public transportation to their medical appointments, shopping trips and daily excursions.	Alameda County Measure B and General Fund
City of Newark	Newark	Same day door-to-door program	Alameda County Measure B
City of Pleasanton	Pleasanton	The City of Pleasanton Paratransit Service (PPS) provides door-to-door, shared-ride paratransit service for eligible Pleasanton and Sunol residents.	MTC grant, Measure B, City General Fund

Agency Name	Cities	Description of Service	Funding Sources (excluding farebox)
City of San Leandro	San Leandro	FLEX shuttle serves key locations such as residential facilities, shopping, transit and community centers, minor deviations are made and passengers can also flag vehicle to stop at any safe location.	Alameda County Measure B
LAVTA	Livermore, Dublin, Pleasanton	WHEELS Para-Taxi Program provides subsidized taxi service through a reimbursement system to WHEELS Dial-a-Ride participants; also offers Livermore Senior Housing Shuttle.	Alameda County Measure B
City of Antioch Senior Bus	Antioch	City wide paratransit service for seniors. A majority of rides are to and from the Antioch Senior Center. Additional support trips for medical appointments, shopping and personal services.	Tri-Delta Funds
City of Lafayette	Lafayette	Van trips to lunch outings and errands for seniors and persons with disabilities who live in Lafayette, Orinda, and Moraga. One van available, one paid driver who works 20 hours a week; team of volunteer drivers in development (currently there are two).	
City of San Ramon	San Ramon	The San Ramon Senior Center provides van service to seniors ages 55 and over to and from the Senior Center. We pick up seniors from their homes and take them home. We provide a once a week shopping shuttle and also have several trips every month.	
Eastern Contra Costa Transit Authority	Antioch	Non-emergency medical service for Medicaid covered appointments.	TDA, STA, Measure C
Richmond Paratransit	Richmond	Low cost transportation services for seniors and people with disabilities including: demand-response, individual trips, group trips, special purpose group tours, shuttle services, nutrition site transportation, subsidized taxi program	Contra Costa Measure C, General Fund, grants
Westcat	Pinole	Paratransit available Mon-Fri for seniors who are over 65 and general public in inaccessible areas (Crockett, Port Costa, Rodeo, and the Viewpointe). On Saturdays same day service is available to all passengers traveling anywhere within the service area.	

Agency Name	Cities	Description of Service	Funding Sources (excluding farebox)
Marin County Transit District	San Rafael	The Novato Dial a Ride is an on-call transportation service for the general public within Novato. Provided by Whistlestop Wheels.	Marin County Measure A
Napa County Transportation Planning Agency	Napa	Five community shuttles, a flexible route service, and two user side taxi subsidy programs are offered to eligible residents.	
City of Foster City	Foster City	The Foster City Connections Shuttle is a free shuttle which provides service within Foster City on two routes. The shuttles make connections with major destinations and fixed route transit service.	City General Fund, C/CAG grant
San Mateo County Aging and Adult Services	San Mateo	Transports clients in County-owned/operated vehicles, as well as provide taxi vouchers and bus passes, to health and supportive services.	
Agnews Developmental Services	San Jose	Agnews transportation department provides repairs and services to fleet vehicles (trucks,buses) and also provides laundry, food, commissary, property delivery, and busing individuals to workshops, school and special events.	Dept. of Developmental Disabilities
Benicia Breeze	Benicia	Taxi Scrip program that provides same day 24-7 service for all ADA paratransit certified residents of Solano County.	
City of Dixon	Dixon	The City of Dixon operates a general public dial-a-ride service operating M-F within the Dixon city limits.	TDA, FTA 5311
City of Vacaville	Vacaville	The Half Fare Discount Taxi Scrip Program provides script for Vacaville's local Taxi Cab company at half the regular fare for qualified individuals (62 years or older or ADA eligible). Taxi cab services through the use of this program are limited to the city limits of the City of Vacaville and to elderly and handicapped residents in the unincorporated area adjacent to Vacaville's city limits.	
City of Vallejo	Vallejo	A taxi scrip program is available for residents age 65 and older or with a disability.	TDA STA

Agency Name	Cities	Description of Service	Funding Sources (excluding farebox)
Fairfield/Suisun Transit	Fairfield	Reduced fare taxi program is a curb-to-curb demand response service designed to transport people 60 years and older; fares are based on one half the metered fare (to maximum fare of \$20)	
Fairfield/Suisun Transit	Fairfield	Senior Volunteer Driver Program for persons 50 years and older. Monday-Friday 9am-3pm.	
Rio Vista Delta Breeze	Rio Vista	Rio Vista Delta Breeze Taxi Scrip Program provides economically priced, door-to-door transportation service to all seniors (age 55 years old or older), persons with disabilities and Medicare Cardholders that are Rio Vista residents. Service is provided 24 hours a day, seven days a week.	
Solano County	7 Solano County Cities	The Solano County Intercity Taxi Scrip Program provides curb-to-curb, same day transportation for ADA Paratransit Certified riders who need to travel between cities within Solano County.	

## **Demand Management Strategies Evaluated**

**Enhanced ADA Paratransit Certification Process.** More sophisticated certification methods that incorporate an in-person assessment lead to more applicants referred to fixed-route transit instead of ADA paratransit, based on their individual functional abilities.

**Implementing Conditional Eligibility.** Conditional eligibility finds that some applicants can use fixed-route service for at least some of their trips and specifies the particular conditions that prevent use of fixed-route service. Some operators are implementing these conditions on a trip-by-trip basis using a detailed and on-the-street analysis of applicants' trip patterns and paths of travel for transit use.

**Travel Training.** Transit agencies are investing in programs that teach persons with disabilities and others how to use fixed-route transit. An individual who has successfully completed travel training and uses fixed-route transit can travel more spontaneously and at less cost than on ADA paratransit (since fixed-route fares are typically less than ADA paratransit fares).

**Paratransit Feeder to Fixed-Route Service.** A few transit agencies identify paratransit riders whose eligibility is based solely on inability to get to and from transit stops and offer them only a ride to and/or from the transit stop, at least for some of their trips.

**Fare Incentives to Use Fixed-Route Service.** Many transit agencies provide fare incentives to their ADA-eligible riders and often a companion as well, typically allowing free use of fixed-route transit service.

**Premium Charges for Service Beyond ADA Requirements.** Where transit agencies provide paratransit service that goes beyond what the ADA requires, they may charge extra for those "premium" services. One common example is service for human service agencies that meet requirements of those agencies that are not guaranteed to other customers.

**Partner with Community Agencies to Supplement ADA Service.** Some transit agencies partner with existing community agencies to support those community agencies in transporting individuals with disabilities, usually clients of the agencies' own programs. The partnerships can take different forms such as providing vehicles to the community providers as well as offering maintenance services, fuel and driver training.

**Align Service to ADA Requirements.** Transit agencies that have provided ADA paratransit service beyond what the ADA requires are increasingly re-aligning the service to the ADA requirements.

**Taxi Subsidies.** Some transit operators have programs that provide discounts for participants to use taxicabs. These programs may reduce the overall cost of providing ADA paratransit by providing a very attractive alternative for customers, one that provides an exclusive ride and does not require an advance reservation, but which is less expensive to provide than ADA paratransit.

## **Productivity Measures**

**Controlling No-Shows and Late Cancellations.** An effective no-show/late cancellation policy can reduce the waste of paratransit resources that results from vehicles that are dispatched for riders who do not take the trip they had booked.

**Changes to Operating Policies.** Some operators have adjusted policies such as the on-time window for passenger pick-ups and the number of days in advance that reservations are accepted. A longer on-time window can make it possible to create more productive schedules. A shorter advance reservations period may reduce the incidence of cancellations and no-shows.

**Paratransit Technology.** Almost all ADA paratransit systems now use computer-assisted scheduling/dispatch systems. In many cases there were modest gains in productivity when these systems were introduced. More current trends are use of Automatic Vehicle Locators (AVL), Mobile Data Terminals (MDTs), and Interactive Voice Response (IVR).

**Manage Supply of Revenue Hours to Match Demand.** A better match between ridership patterns and revenue hours deployed can reduce ADA paratransit operating costs.

**Effective Use of Taxis and Other Non-Dedicated Vehicles.** Taxis are sometimes used directly as an integrated component of ADA paratransit operations. The paratransit provider or broker determines that specific trips should be assigned to a taxi provider; this decision is made by the provider or broker for efficiency reasons, not by the rider for reasons of convenience. Effective use of taxis to provide ADA paratransit service can reduce costs.

**Vehicle sharing.** As part of a mobility management strategy, some operators are experimenting with mutual sharing of capacity with human service transportation providers. This strategy holds the promise of making productive use of vehicles, reducing operating cost by using less expensive providers, and reducing the number of trips shifted from human service providers to ADA paratransit.

**Vehicle mix.** Some operators are experimenting with using small, fuel-efficient vehicles in ADA paratransit service. Small vehicles are not only less expensive to operate than larger ones, they may be faster, both in traffic and in boarding and unloading passengers. The best mix of vehicles needs to balance these advantages with the need to group trips for efficiency and the need to provide service for people who use wheelchairs who cannot transfer out of their wheelchairs.

**Alternative and Hybrid Services.** In some areas it is more cost effective to serve all of the public, including people with disabilities, with a single service rather than with separate fixed-route and ADA paratransit services. Depending on the area, general public dial-a-ride or route deviation (also known as flex-route) services may be appropriate.

## **Cost Containment Strategies**

**Use of Volunteer Drivers in ADA Paratransit.** Volunteers are clearly less expensive than paid employees for driving ADA paratransit vehicles or performing office tasks, although there are expenses for recruitment, training, drug testing, etc. Assuming that service quality is not jeopardized, using volunteers may be particularly effective during peak periods when a short volunteer driver shift can avoid deploying a longer dedicated driver shift.

**Capitalizing Facilities and Vehicles.** If capital funds can be used to purchase vehicles or an operating facility instead of having contract providers provide these, then the operating cost of paratransit service will be reduced.

**Internal Cost Cutting.** Operators have cut costs through staff reductions, reduced work hours, wage freezes, reductions in business expenses, and negotiating cost containment strategies with contract providers.

## **Restructuring Service**

**Separating a Control Center from Vehicle Operations.** Some operators have been able to improve productivity by having one entity perform scheduling and dispatching (a “control center”), while other entities, often including taxicabs, operate vehicles.

**Consolidate Administration or Operations.** If a single entity provides or oversees all paratransit service in an area served by multiple fixed-route transit systems, there may be economies of scale or elimination of unnecessary duplication of functions. Consolidation can also allow for added expertise and different service structures, such as having a control center separate from vehicle operations.

## **Creating Alternatives to ADA Paratransit**

**Enhancements to Fixed-Route Service.** Making fixed-route services as welcoming as possible to riders with disabilities, can make other strategies more effective, especially implementing conditional eligibility, travel training, paratransit feeder to fixed-route service, and fixed-route fare incentives.

**Volunteer Driver Programs.** Volunteers provide door-to-door and often door-through-door service, usually as a single ride as opposed to a shared ride, typically for seniors who are frail and no longer drive. A volunteer driver program is a non-ADA program, typically not operated by a transit agency. It is unrelated to the strategy of having volunteers drive ADA paratransit vehicles that was discussed earlier.

**Mobility Management.** In the context of specialized transportation, mobility management involves facilitating transportation improvements for seniors, persons with disabilities and individuals with lower incomes and connecting people with appropriate services that work for them through a single point of contact.

**Targeted Transit Promotion to Seniors.** Targeted marketing to encourage seniors to use fixed-route transit service may include promotions based on a limited period (a week or a month) when transit is free for seniors, distributing targeted marketing materials through senior housing and senior centers, and helping older people learn to use transit by providing training or group trips. If older adults can be encouraged to try transit and use it before they can no longer drive and look for alternatives, they will become more comfortable with transit and may use it as a reasonable option for local trip-making, potentially delaying the time when they apply for ADA paratransit. Importantly, use of transit will also give the seniors more independence and mobility, boosting transit ridership as well as increasing the constituency for transit.

**Shuttles and Community Buses.** Senior-friendly shuttles, “community buses,” or circulators are generally designed to serve short trips within communities or neighborhoods with an emphasis on seniors and destinations they frequent. The ability of these services to substitute for ADA paratransit in meeting the trip demand of seniors and others with specialized needs for frequent local trips results in avoided costs from the transit agency’s more costly ADA paratransit trips.

**Walkable Communities and Improved Land Use Planning.** “Walkable communities” are pedestrian friendly, with sidewalks and pathways connecting residential areas with activity centers. More compact, mixed-use communities with effective pedestrian facilities allow for more walking trips and improve both the choice and effectiveness of transit by creating higher densities and improved access to transit. Improved land use planning can promote senior housing and other senior-related facilities that are sited in locations that are close-in within the community and near activity centers featuring shopping, medical and other services, as opposed to locations outside the community and isolated from activity centers.



Walkable communities are closely related to the concept of “complete streets,” which are streets designed with all users in mind - including bicyclists, public transportation vehicles and riders, and pedestrians of all ages and abilities.

**Coordination with Human Service Transportation.** The region can work to promote participation by state human service agencies in coordination efforts. Until now, mandates for coordination have applied only to public transportation agencies but not to the human service agencies with which coordination is needed. An effective coordination process would seek ways for transit operators and human service agencies to cooperate in ways that provide more efficient service that reduces cost for all involved and that matches riders with the most appropriate service for them. In the short term, transit operators or their paratransit providers can participate in providing non-emergency medical transportation (NEMT) for Medi-Cal and receive payment for this service.

**Consolidated Transportation Service Agencies (CTSAs).** Under California law, CTSAs are one mechanism to promote coordination with human service transportation. A non-profit organization, once designated as a CTSA can claim Transportation Development Act funds. A public agency or non-profit with CTSA designation may have priority for certain types of funding from the California Department of Transportation.